

Fishery Data Series No. 05-35

Composition of the Recreational Lingcod Harvest in Southcentral Alaska, 1993-2002

by

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and

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June 2005

Alaska Department of Fish and Game

Divisions of Sport Fish and Commercial Fisheries



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Weights and measures (metric)		General		Measures (fisheries)	
centimeter	cm	Alaska Administrative		fork length	FL
deciliter	dL	Code	AAC	mideye-to-fork	MEF
gram	g	all commonly accepted		mideye-to-tail-fork	METF
hectare	ha	abbreviations	e.g., Mr., Mrs., AM, PM, etc.	standard length	SL
kilogram	kg			total length	TL
kilometer	km	all commonly accepted			
liter	L	professional titles	e.g., Dr., Ph.D., R.N., etc.		
meter	m		@		
milliliter	mL	at			
millimeter	mm	compass directions:			
		east	E		
		north	N		
		south	S		
		west	W		
		copyright	©		
		corporate suffixes:			
		Company	Co.	alternate hypothesis	H _A
		Corporation	Corp.	base of natural logarithm	e
		Incorporated	Inc.	catch per unit effort	CPUE
		Limited	Ltd.	coefficient of variation	CV
		District of Columbia	D.C.	common test statistics	(F, t, χ ² , etc.)
		et alii (and others)	et al.	confidence interval	CI
		et cetera (and so forth)	etc.	correlation coefficient (multiple)	R
		exempli gratia		correlation coefficient (simple)	r
		(for example)	e.g.	covariance	cov
		Federal Information		degree (angular)	°
		Code	FIC	degrees of freedom	df
		id est (that is)	i.e.	expected value	E
		latitude or longitude	lat. or long.	greater than	>
		monetary symbols		greater than or equal to	≥
		(U.S.)	\$, ¢	harvest per unit effort	HPUE
		months (tables and figures): first three letters		less than	<
			Jan.,...,Dec	less than or equal to	≤
				logarithm (natural)	ln
				logarithm (base 10)	log
				logarithm (specify base)	log _b , etc.
				minute (angular)	'
				not significant	NS
		registered trademark	®	null hypothesis	H ₀
		trademark	™	percent	%
		United States		probability	P
		(adjective)	U.S.	probability of a type I error (rejection of the null hypothesis when true)	α
		United States of America (noun)	USA	probability of a type II error (acceptance of the null hypothesis when false)	β
		U.S.C.	United States Code	second (angular)	"
		U.S. state	use two-letter abbreviations (e.g., AK, WA)	standard deviation	SD
				standard error	SE
				variance	
				population	Var
				sample	var

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SOUTHCENTRAL ALASKA, 1993-2002**

by

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June 2005

This investigation was partially financed by the Federal Aid in Sport Fish Restoration Act (16 U.S.C. 777-777K) under Projects F-10-9 through F-10-18, Job No. B-2-1.

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This document should be cited as:

Stock, C. E. and S. C. Meyer. 2005. Composition of the recreational lingcod harvest in Southcentral Alaska, 1993-2002. Alaska Department of Fish and Game, Fishery Data Series No. 05-35, Anchorage.

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ABSTRACT

From 1993 through 2002, age, length, and sex data were collected from 5,561 lingcod *Ophiodon elongatus* harvested in the recreational fishery at the ports of Kodiak, Homer, Seward, Whittier, Valdez, and Cordova. Ages of harvested fish ranged from 3 to 24 years, and lengths ranged from 43 to 142 cm. The age and length distributions of the harvest shifted over time toward older, larger fish at most ports, indicating either changes in recruitment, increasing survival, or increasing selectivity for larger fish in the harvest. Females made up 56% -93% of the harvest at ports with a minimum size limit of 35 in (89 cm), and 22% -62% at Kodiak (no size limit). Interviews were conducted for 19,381 vessel-trips in which anglers either targeted halibut or groundfish or caught them while targeting other species such as salmon. Interviewed anglers reported 95,109 days of effort and a harvest of 5,340 lingcod. Interview data provided estimates of the spatial distribution of lingcod effort and harvest. Defining effort was problematic since most lingcod were caught while targeting other species. Lingcod harvest by all user groups was concentrated along the outer coast of Kodiak Island, the Kenai Peninsula from the Chugach Islands to Cape Puget, and in the outer waters of Prince William Sound. For the most part, the proportion of effort and harvest in each statistical area was highly variable from year to year, and no strong trends were apparent.

Key words: lingcod, *Ophiodon elongatus*, Alaska, Kodiak, Homer, Seward, Valdez, Whittier, Gulf of Alaska, Chiniak Bay, Cook Inlet, Resurrection Bay, Prince William sound, recreational fishery, sport fishery, statistics, estimation, species, age, length, sex, angler-day, vessel-trip, effort, harvest, spatial, composition, fin ray.

INTRODUCTION

FISHERY DESCRIPTION

Lingcod *Ophiodon elongatus* is an important component of the marine recreational fishery in the northern Gulf of Alaska. Although most anglers in Southcentral Alaska target halibut *Hippoglossus stenolepis* or salmon *Oncorhynchus*, lingcod is a sizeable component of the overall catch. The vast majority of the sport lingcod harvest occurs in nearshore state waters from Kodiak Island to eastern Prince William Sound. These nearshore waters are divided into four management areas for sport fishing as follows (Figure 1):

1. Kodiak - waters surrounding the Kodiak archipelago, including Kodiak, Afognak, and Shuyak islands, and waters east of the midline of Shelikof Strait. The Kodiak management area also includes the Alaska Peninsula and Aleutian Islands, but harvest in this area is negligible and will not be covered in this report. The primary port of lingcod landings is Kodiak, though recreational lingcod harvest occurs throughout the area.
2. Cook Inlet - waters of Cook Inlet north of the latitude of Cape Douglas and west of the longitude of Gore Point, including the Barren Islands. Homer is the primary port of lingcod landings.
3. North Gulf - waters between the longitude of Gore Point and the longitude of Cape Puget. The only port is Seward.
4. Prince William Sound (PWS) - waters between the longitude of Cape Puget and the longitude of Cape Suckling. Recreational harvest occurs throughout the sound and the primary port of sport landings is Valdez, but landings at Whittier and Cordova have increased in recent years.

Specific targeting of lingcod throughout this region is relatively rare with most of the catch and harvest incidental to the thriving sport halibut fishery. Some lingcod harvest may occur simultaneously with halibut harvest, but probably more commonly occurs when anglers or charter operators targeting halibut have been unable to access their preferred fishing locations or

were unsuccessful. In these situations, lingcod may become an alternate target for a portion of the trip. Anecdotal information also suggests that a small but growing number of individual charter and private vessels are now specifically targeting lingcod for at least a portion of their trips. Some of these trips are geared toward catching trophy-sized lingcod. Lingcod are also incidentally caught by anglers fishing for coho salmon *O. kisutch* and Chinook salmon *O. tshawytscha*. For many anglers, the attraction of this species lies in its aggressive nature, potential large size, and the high food value of the flesh.

The recreational halibut and groundfish¹ fisheries contribute significant amounts of revenue to local and regional economies of Southcentral Alaska. Recent estimates for the Cook Inlet area alone indicate that \$15 million dollars were spent by charter clients in 1998 (NPFMC 2001; page 71). The economic benefits derived from the fisheries are not separable by species; therefore, no direct economic estimates for the recreational lingcod fishery have been made. Nevertheless, it is clear that the marine recreational fisheries of Southcentral Alaska play a vital role in the economies of the region and the state.

The Alaska Department of Fish and Game (ADF&G) has management authority for recreational and commercial lingcod fisheries in state waters (0-3 nmi) and federal waters (3-200 nmi). Since 1993 the open season has been July 1 through December 31, with the closure designed to protect spawning and nest-guarding fish from harvest. The daily bag/possession limits are 2/4 lingcod in Kodiak and PWS waters, 2/2 in Cook Inlet, and 1/1 in North Gulf waters. Resurrection Bay is closed year-round to fishing for lingcod. There is a minimum size limit of 89 cm (35 in) for all management areas except Kodiak, which has no minimum size limit. A State of Alaska sport fishing license or legal substitute is required for all resident and nonresident anglers age 16 and older. Residents 60 years of age and over are required to possess a free permanent identification in lieu of a license.

Recreational lingcod harvest and catch have been estimated annually through the Statewide Harvest Survey (SWHS) program for all areas since 1991 (Howe et al. 1995, 1996, 2001 a-d; Jennings et al. 2004, *In prep*; Mills 1992, 1993, 1994; Walker et al. 2003). Unpublished estimates are also available for the Cook Inlet and North Gulf fisheries only in 1990. Survey questionnaires are mailed to a large random sample of households (e.g., 47,000 in 2000) containing at least one licensed resident or nonresident angler. Survey estimates are corrected for non-response bias through multiple mailings.

Annual estimated lingcod harvest for the four management areas peaked at about 15,300 fish in 1992, dropped to a low of about 7,000 fish in 1995, and climbed back to over 10,000 fish in 2000, 2001 and 2002 (Table 1, Figure 2). The North Gulf generally accounted for the largest share of harvest since 1991, with the exception of 1997 and 1998 when the PWS area had the greatest harvest.

The SWHS estimates of the recreational lingcod catch far exceed the harvest, with the difference representing released fish. Anglers released an estimated 57%-73% of lingcod caught from 1993 through 2001, in large part due to the minimum size limit applied in most management areas. The total number of released fish exceeded the harvest most years (Figure 2). The Cook Inlet

¹ The term “groundfish” is used in this report to mean any marine finfish except halibut, osmerids, herring, or salmonids (State of Alaska Administrative Code 5 AAC 39.975[21]).

area accounted for the largest percentage of released fish in the early 1990s, although these estimates are believed to be inflated due to misidentification by survey respondents.

Estimates of total removals would need to take into account mortality of released fish, which is believed to be very low. Lingcod do not have a swim bladder and are apparently not subject to significant decompression trauma. Most lingcod that are released are caught in the halibut fishery, and most anglers in Southcentral Alaska fish for halibut with circle hooks. Circle hooks are rarely swallowed and most fish are hooked in the corner of the mouth. In a California study, Albin and Karpov (1998) estimated release mortality for rod and reel using baited J-hooks or treble hooks at 4.3% (95% C.I. 0-9.3%). In a trawl mortality study, large lingcod (67-84 cm) that were caught, towed for 180 min, and exposed to air for 7 min had only 20% mortality over 21 d (Parker et al. 2003). Lingcod caught under the same conditions and exposed to air for 30 minutes experienced 40% mortality over 21 d. In another study designed to evaluate factors affecting bycatch mortality, lingcod from 41 to 67 cm in length that were towed in laboratory trawls for 4 h and exposed to air for 30 min had no mortality (Davis and Olla 2002). All of these lingcod survived when exposed to air only (no towing) for 45 min. In aggregate, these studies tend to indicate that lingcod are hardy and probably not very susceptible to release mortality.

BIOLOGY, STOCK STATUS, AND MANAGEMENT ISSUES

Lingcod inhabit depths of 400 m, but more typically are found from 10 to 100 m (Cass et al. 1990). They are common in Southcentral Alaska waters east of the Shumagin Islands, including the Kodiak Archipelago, the Barren Islands, the outer Kenai Peninsula coast from the Chugach Islands to Cape Puget, and the outer waters of PWS from Montague Strait to Cape Suckling. Lingcod are moderately long-lived, with a maximum age in Alaska of about 25 years (Munk 2001). Growth is relatively rapid, with males and females reaching lengths of 50-60 cm by age 4 (Meyer 1992). Females can attain lengths in excess of 140 cm and weights in excess of 30 kg. Age and length at maturity are not well known for Alaska waters. In Southeast Alaska, 50% of female lingcod were mature at about 83 cm (Gordon 1994).

The structure of lingcod stocks is largely unknown. Tagging studies in Oregon, Washington, and British Columbia indicate that most lingcod are non-migratory, but that there is also a migratory component of each population (Barss and Demory 1989; Jagielo 1990; Mathews and LaRiviere 1987; Smith et al. 1990). Tagging studies have consistently found that females move greater distances and spend more time in deep water than males, at least partly because males are bound to shallower waters during nest guarding. The degree to which aggregations of lingcod are reproductively isolated is unknown. Both adult movements and drift of larvae provide ample opportunity for gene flow. Jagielo et al. (1996) failed to detect any significant genetic structuring among coastal collections of lingcod from Alaska to California.

Lingcod stocks in Southcentral Alaska have not yet been thoroughly assessed. Sport harvest length and age composition are available from the Seward fishery only since the late 1980s, and from other ports since the early 1990s. Availability of age, length, and sex data from commercial harvest is spotty and more limited. Sport fishery CPUE data are also available back to the early 1980s, but there are no comparable commercial or survey CPUE time series. Jig surveys were conducted near Seward for various reasons in 1992 (unpublished), 1993-1994 (Vincent-Lang 1995), and 1998 (Bethe and Meyer 2002). Only the 1998 survey closely documented CPUE. The department is compiling available data for an analytical assessment of

lingcod stocks, but possible obstacles to success include a lack of fishery-independent data and lack of a standardized fishery CPUE.

Without established objectives for the recreational fishery and an assessment of abundance, the Alaska Board of Fisheries (BOF) and ADF&G have adopted a precautionary approach to management of the fishery. Bag limits were first implemented in the North Gulf fishery in 1987 to provide for sustained harvest. Sport harvest age and size composition data from 1987-1991 indicated a pervasive lack of recruitment in the Seward area fishery (Vincent-Lang and Bechtol 1992). By 1993 Resurrection Bay was closed year-round to lingcod fishing, and a closed season, minimum size limit, and reduced bag limit were established for North Gulf waters. The season, bag limit reductions, and size limit soon followed in other waters. Meyer and Stock (2002) summarize the regulatory history for the sport lingcod fishery.

RECREATIONAL HARVEST ASSESSMENT PROGRAM – GOALS AND OBJECTIVES

Since 1991 the Gulf of Alaska Groundfish Harvest Assessment Program has collected information annually from the recreational fishery for halibut and groundfish. The program is supported by Wallup-Breaux Dingell-Johnson Federal Aid in Fish Restoration funds. The goal of this ongoing monitoring project is to provide data characterizing the recreational harvest in order to manage halibut, rockfish, lingcod and shark fisheries for sustained yield. Given the impracticalities and high cost of regular surveys for most marine bottomfishes, assessment efforts have been directed toward indirect evaluation of stock condition through harvest characteristics and fishery performance. In practice, this has been accomplished through a combination of (1) random sampling of harvested fish to collect length, sex, weight, age, and other data, and (2) conducting interviews of returning anglers and charter operators to describe the fishery. It is hoped that this information, combined with similar data from commercial fisheries, provides adequate insight into gross relative changes in stock conditions. Also, these data may eventually be used in analytical stock assessment models.

This report focuses on lingcod fishery data collected from 1993 to 2002. Primary objectives were to estimate for each port:

1. age, length, and sex composition, and
2. spatial distribution of lingcod effort and harvest by user group,

such that the estimated proportions within each age, length category, sex, or statistical area are within 0.10 (10 percentage points) with 95% confidence. It was recognized every year that the desired level of precision would not be obtained at some ports due to lack of harvest in relation to the sampling effort. The objective criteria, therefore, represented desired targets rather than absolute minimums.

METHODS

STUDY DESIGN AND SAMPLING PROCEDURES

Overall Study Design

Dates of sampling coverage varied by port and year (Table 2). Lingcod data were collected every year in the ports of Kodiak, Homer, Seward and Valdez. Whittier was sampled from 1998 to 2003 but the 1998 sampling season was very limited. A few lingcod data were also collected in Cordova in 1999 in conjunction with a study of the groundfish fishery in eastern PWS (Miller 2001). Data from these ports were assumed to represent the harvest in the Kodiak, Cook Inlet,

North Gulf, and Prince William Sound management areas (Figure 1). One fishery technician was stationed in each port during the period late May through early September to sample halibut as well as lingcod, rockfish, and sharks. Although some lingcod are landed at unsampled ports, lodges, and private docks throughout Southcentral Alaska, these ports and dates accounted for the vast majority of recreational lingcod harvest in the region.

Sampling at each port consisted of collecting biological data to estimate age, length, and sex composition of the harvest (Objective 1), and conducting interviews of anglers and charter boat captains to estimate the geographic distribution of effort and harvest (Objective 2). Because of differences in layout and the amount of fishing effort, sampling designs varied by port. For all ports, 5 sampling days were scheduled per week at random, subject to the constraint that 2 days off must be consecutive (a union contract stipulation). Biological and interview sampling were conducted on separate days at Homer, Seward, and Valdez. Biological sampling and interviews were conducted simultaneously at Kodiak, Whittier, and Cordova because effort and harvest were relatively lower than at other ports and both tasks could be managed effectively at the same time. For Homer, Seward, and Valdez, 3 biological and 2 interview sampling days were selected at random such that each type was distributed proportionally among weekends and weekdays. Beginning in 1997 in Valdez and in 1999 in Homer, biological data were also collected from lingcod on interview days to boost sample sizes. Holidays were given no special treatment in terms of sampling effort because previous analyses showed no significant difference in effort or harvest between holidays and non-holidays.

Shifts varied by port to match fishing patterns. Biological and interview shifts generally fell between 1400 and 2200 hours, with start times adjusted periodically to intercept the majority of the harvest. In 1996, interviews were conducted in Homer in two shifts, 1000-1600 hours and 1600-2200 hours, because it was suspected that significant numbers of private boats returned to port earlier in the day. A review of 1996 data from Homer indicated there was no advantage to interviewing over this 12-hour period because most anglers exited between 1400 and 2100 hours.

The Kodiak fishery was sampled at St. Paul's Harbor, St. Herman's Harbor (Dog Bay), and the U.S. Coast Guard Base. The Homer, Whittier, Valdez, and Cordova fisheries were sampled only at the respective small boat harbors. In Seward, the technicians obtained biological data in the harbor and at military recreation camp fish cleaning facilities, but conducted all interviews in the harbor. Sampling effort for biological data was rotated within each shift between public and charter fish cleaning stations, boat ramps, and the docks to distribute sampling effort across user groups and sample early- and late-returning anglers.

The Homer and Seward harbors were too large and sport fishing effort was too great to contact and interview all returning boats. The harbors were therefore divided into three to five smaller areas with comparable numbers of recreational boats. Interviews were conducted for 1 hour in each area. The initial order of areas was assigned randomly and then "rotated" systematically, repeating the first, second and third areas sampled each day in order to fill out a 7-hour shift. Under this design all areas and hours received equal sampling effort during the season.

Two military recreation camps in Seward operated charter and lottery (free) vessels for military personnel. Beginning in the early 1990s, these vessels voluntarily provided daily logbook data that was comparable to the interview data, so these vessels were not contacted for interviews. Interview data collection procedures were modified in 1995, and from that year on the military vessels were interviewed in the same manner as all other charter and private vessels.

Biological Data Collection

Unstable marine weather and seasonal trends in tourism generate substantial daily and monthly variation in the pattern of marine recreational harvest and effort. Lingcod sample sizes were often not proportional to the total harvest over time, or to the harvest by each user group, due to competing sampling demands, lack of sampling in some locations, cleaning of fish at sea, non-cooperation by anglers, and motivational differences between port samplers. To address non-proportional availability, sampling goals were established for each user group at each port. This allowed samplers to allocate more sampling effort toward user groups whose harvest was typically underrepresented.

Maximum total length, with dorsal and ventral lobes of the caudal fin pinched together (Anderson and Gutreuter 1983), was recorded to the nearest millimeter in 1993-1999 and to the nearest centimeter thereafter (2000-2002). When possible, lingcod were weighed whole to the nearest 0.5 kg on a 35×0.5 kg spring scale. Sex was determined by direct examination of gonads or presence/absence of a urogenital papilla. The 4th-8th rays of the posterior lobe of the dorsal fin were removed and stored in a labeled envelope made of heavyweight Rite-in-the-Rain® for later age determination. Date, user group (charter, private, military, etc.), ADF&G groundfish statistical (stat) area, length, and sex were recorded on the envelope. These data were transferred to Mark Sense Standard Age-Weight-Length forms (ADF&G Version 1.1 used for years 1993-1999; Version 1.2 for 2000-2002).

Interview Procedures

Interviews were conducted for any vessel that targeted bottomfish (regardless of success) or caught bottomfish (any combination of halibut, rockfish, lingcod, or shark) while targeting other species. The following information was recorded for each boat-trip: the hour of the interview, harbor interview area (Homer and Seward only), user group, whether it was a single or multiple-day trip (1995-1999) or duration of trip in days (2000-2002), the primary stat area(s) fished, number of angler-days fished (including captain and crew of charters), target species category, the number of lingcod kept and released, and similar information on other groundfish species. The CFEC vessel license number was recorded for charter boats only beginning in 1997. Whenever possible, interviews for private vessels were conducted with the most knowledgeable anglers on board. Skippers or crewmen on charter boats were interviewed (rather than clients) to obtain accurate reporting of statistical areas and species. The primary stat area of capture was recorded because anglers and charter operators were usually not able to accurately break down their effort or harvest by statistical area if they fished in multiple areas or for multiple species in a day. Interview data were recorded on hand-written forms (1993-1994), Mark Sense Marine Interview Version 1.0 forms (1995-1999), and Mark Sense Port Sampling Interview Version 1.0 forms (2000-2002).

There have been changes over the years in how target categories were recorded. Before 1995, target categories were recorded exactly as the angler responded. Starting in 1995, Mark-Sense Marine interview forms were used to code interview responses, limiting the number of possible target categories. Beginning in 1995, target categories were coded as halibut only, rockfish only, lingcod only, bottomfish (halibut and groundfish or any combination of groundfishes), bottomfish+salmon (halibut or groundfish in conjunction with salmon), or salmon only. The target category salmon shark was added in 2000. Target categories were interpreted and coded by the technician based on anglers' or charter captain's response. For this report, the original target category responses from 1993 and 1994 were coded to the newer system. For example, if

an angler said they were targeting lingcod and rockfish, the response was coded to “bottomfish.” This did not significantly change the amount of lingcod effort because the number of vessel-trips reporting lingcod as a target combined with another species constituted a small proportion of the total effort.

Age Determination

Lingcod dorsal fin-ray sections were aged following Beamish and Chilton (1977). This is the standard ageing method used on the U.S. west coast and in British Columbia. It has been validated by Cass and Beamish (1983) and McFarlane and King (2001).

Methods of preparing fin ray sections and assigning ages evolved and improved over the years covered. Before 2000, fins were dried either by hanging from wire clips in a heated room or outbuilding, or tacked to a sheet of plywood at room temperature. Once dry, the fins were encased in fiberglass resin and 1.27-1.91 mm (0.050-0.075 in) thick sections were cut perpendicular to the rays using an Isomet low-speed saw. Before 1997 the sections were immersed in methanol in a dark-bottomed Petri dish and examined at 10-35X using reflected light. Beginning in 1997, the sections were mounted on glass slides and examined using transmitted light. Beginning in 2000, fins were air-dried at room temperature inside the original sample envelope. Dried fins were then coated with Posi-Cure+®² thick gap-filling cyanoacrylate adhesive and hardened using Posi-Set+ accelerator prior to sectioning. Sections were cut to 1.90 mm and mounted on glass slides as described above. Changes in methods of fin drying, sectioning, and mounting largely addressed efficiency and had little effect on the precision or accuracy of age determination.

Each year a single reader aged all fin sections, and there were three different age readers during the period 1993-2002. Variability in assigned ages was assessed by repeated ageing of a reference set of lingcod fin rays. The reference set was established in 1991, and readers were subsequently trained using the reference set and not allowed to assign ages until (1) they had a high percentage of agreement, and (2) differences were distributed fairly symmetrically around zero. These were subjective measures and ageing variability has not yet been summarized in a report. Readers were instructed to assign ordinal codes for each aged fish indicating their confidence that the same age would be obtained in repeated ageing. All readers consistently expressed intermediate to low levels of confidence. In repeated ageing of reference sets, the majority of ages were within 3 years (plus and minus).

In 1998 we determined, through consultations with a Canadian lingcod ager³, that we had been assigning ages using sections that were often too far from the base of the fin. Most harvested lingcod are relatively old and large, and many of the fin sections were hollow or vascularized at the center. Readers had been assigning age using the lowest possible section that had at least partial evidence of annuli near the origin of the fin ray. This likely produced ages that were biased low by 1 or 2 years. Therefore, in 1999 we obtained juvenile lingcod to establish measurements from the origin to the first, second, and third annuli. These measurements were applied to fin ray sections cut at a standard distance from the base to determine the number of annuli missing in the hollow center before the first visible annulus.

² Product names used in this report are included for scientific completeness but do not constitute product endorsement.

³ Shayne MacLellan, Pacific Biological Station, Fisheries and Oceans, Nanaimo, British Columbia V9R 5K6.

DATA HANDLING

The project leader routinely examined data forms and sample envelopes at regular intervals throughout each season to maintain high data quality. Mark Sense forms were optically scanned at the end of each field season and data were output in ADF&G Sport Fish Division standard Mark Sense file formats (ASCII). Files were edited for omissions, transcription errors, extreme values, and length-weight and length-age outliers. Copies of all data files, field specification forms, and analysis programs are archived with ADF&G Sport Fish Division, Research and Technical Services, in Anchorage (Appendix A1).

DATA ANALYSIS

Age, Length, and Sex Composition

Age, length, and sex composition (Objective 1) were expressed as the proportion of the harvest in each age, length, or sex category. Age composition, for example, was estimated at each port and year as

$$\hat{p}_i = \frac{n_i}{n}, \quad (1)$$

where:

- \hat{p}_i = the estimated proportion of age i fish in the harvest,
 n_i = the number of age i fish in the sample, and
 n = the total number of aged fish.

The variance of each proportion was estimated by:

$$v(\hat{p}_i) = \frac{\hat{p}_i(1 - \hat{p}_i)}{n - 1}. \quad (2)$$

The finite population correction factor to the estimated variance was ignored because sample sizes were small relative to the number of fish in the harvest (Thompson 1992, page 15).

The above estimators assume that either (a) sample sizes from each user group were proportional to the number of lingcod harvested by each user group, or (b) there were no differences in age, length, or sex composition between user groups. These assumptions were investigated by comparing sample sizes to relative harvests reported in interviews. Where the sample proportions by user deviated substantially from the harvest proportions, and sample sizes were large enough to obtain a valid test, chi-square tests were used to test for differences. If chi-square tests indicated a statistical difference, or if sample sizes were too low for the test to have any real power, estimates were stratified by user group for comparison to the unstratified estimates (Thompson 1992; page 104):

$$\hat{p}_{i_{ST}} = \sum_j h_j p_{ij}, \quad (3)$$

where:

- h_j = the estimated proportion of the total harvest taken by user group j (stratum weight),
 p_{ij} = the estimated proportion of fish in age class i taken by user group j .

Length and sex composition were also estimated using equations 1-4, substituting “length” or “sex” for “age.” Length categories were established as 5 cm midpoints at 40, 45, 50...140 cm. Lingcod harvested during the closed season and lingcod shorter than the minimum legal size were confiscated and included in all estimates.

In all comparisons of age composition, stratified estimates were not substantially different from the unstratified estimates. In the worst case (Seward 1996) the maximum difference in the proportion of any age class was only 0.049 or 4.9%, well within the 10% limits of desired precision. The same was true of length composition—even when length composition differed by user and sample sizes were not proportional to the reported harvest by user group, stratified and unstratified estimates of the proportion in any length group differed by no more than 0.029, or 2.9%. Therefore, unstratified estimates of age and length composition (all data pooled) are presented in this report.

In comparisons of sex composition, the Seward 1996 sample was significantly different between user groups ($\chi^2 = 7.19$, df = 2, P = 0.03) and the stratified estimate of percent females differed from the unstratified by 12%. This one estimate of sex composition was therefore stratified by user group using harvest reported in interviews to estimate the stratum weights. Variance of the estimated proportion by sex was estimated using:

$$v[\hat{p}_{i_{st}}] = v\left[\sum_{j=1}^k \hat{h}_j \hat{p}_{ij}\right], \quad (4)$$

$$= v(\hat{h}_1 \hat{p}_{i1}) + v(\hat{h}_2 \hat{p}_{i2}) + \dots + v(\hat{h}_k \hat{p}_{ik}) + 2 \sum_{j < k} \sum \text{cov}(\hat{h}_j \hat{p}_{ij}, \hat{h}_k \hat{p}_{ik}), \quad (5)$$

where:

$$= v(\hat{h}_j \hat{p}_{ij}) = v(\hat{h}_j) \hat{p}_{ij}^2 + \hat{h}_j^2 v(\hat{p}_{ij}) - v(\hat{h}_j) v(\hat{p}_{ih}), \text{ and}$$

$$\text{cov}(\hat{h}_j \hat{p}_{ij}, \hat{h}_k \hat{p}_{ik}) = [\hat{p}_{ij} \hat{p}_{ik}] \left[-\sqrt{v(\hat{h}_j) v(\hat{h}_k)} \right].$$

At some ports, particularly Kodiak and Seward before 1996, samples included a significant number of fish of unknown user group. These fish were deposited in carcass collection barrels when the technician was away from the site or the user group was otherwise not able to be determined. All tests and comparisons used only fish of known user group, and the “unknowns” were assumed to be distributed similarly to the rest of the sample. All “unknowns” were included in unstratified estimates.

Spatial Distribution of Effort and Harvest

The proportion of lingcod effort (in angler-days) and harvest (in number of fish) in each ADF&G groundfish statistical (stat) area were also estimated for each fleet (Objective 2) by equations 1 and 2, substituting stat area for age group. Proportions by stat area were estimated separately for each user group. Only interview data collected during the open season (July– December) were included in the analysis of the distribution of effort, but all interview data were included when summarizing the distribution of harvest.

Defining “lingcod effort” was problematic. Anglers very rarely reported lingcod as the sole target species of their trip. More often, anglers that harvested lingcod reported that they were fishing for halibut, bottomfish, or halibut and other bottomfish. Depending on the terminal gear and locations fished, effort targeted on other species (including salmon) can also be effective for lingcod. Given that the objective was to estimate the spatial distribution of effort targeted on lingcod, lingcod effort was defined as effort for the target categories “lingcod only,” “bottomfish,” or “bottomfish and salmon.” The proportions of harvest by stat area, however, were calculated regardless of the target species indicated. Because of this difference there are stat areas with lingcod harvest but no lingcod effort.

Estimates of spatial distribution of effort and harvest apply only to the fleets returning to the sampled ports, not to particular waters or areas. For example, the spatial distributions of harvest and effort were estimated for the fleet based in Kodiak city, not for the Kodiak area. Similarly, the distribution of harvest and effort were not estimated for all fishing in PWS, but rather it was estimated separately for the Seward, Whittier, and Valdez fleets, all of which fish overlapping parts of PWS.

RESULTS

SAMPLING SUMMARY

Data on length, age, or sex were collected from 5,561 lingcod throughout Southcentral Alaska during the period 1993-2002 (Table 3). Total sample size each year ranged from 289 to 809 fish per year. The number of lingcod samples with unknown user group information was highest at Kodiak and Seward, where technicians relied more heavily on carcass collection barrels placed near cleaning stations in the harbors to obtain samples when the technician was busy or away. The use of these barrels was reduced in about 1997 in order to collect user group information from more of the fish. The 1998 Whittier sample was zero, but the sampling season was abbreviated that year and only one lingcod was reported kept by interviewed anglers. The 1999 Cordova sample was only 13 fish, so no estimates were generated from these data. Seward and Valdez accounted for the highest percentages of the total sample (40% and 28%, respectively).

From 1993 to 2002, interviews were obtained for 19,381 vessel-trips in which anglers either targeted halibut or groundfish or caught halibut or groundfish while targeting other species such as salmon (Table 4). The number of vessel-trip interviews varied by year and by port due to differences and changes in sampling design, effort, weather, inseason schedule changes, vacancies, and other factors. Interviewed anglers (including charter captains and crew) reported a total of 95,109 angler-days of fishing effort and a harvest of 5,340 lingcod.

Data from interviews conducted on or after July 1 each year (the open lingcod season) indicated there was no significant directed sport fishery for lingcod at any of the ports. Only 164 angler-days of effort were reported exclusively for lingcod at all ports during the entire period 1993-2002 (Table 5). Lingcod were harvested primarily by anglers that reported targeting halibut, bottomfish, or bottomfish and salmon combined.

While compiling estimates of age, length, and sex composition, the proportions of lingcod reported harvested by each user group in interviews were compared to the user group proportions of the biological samples to see if sampling was representative (see Data Analysis section above). The charter proportion of the reported harvest from interview data was higher than the

charter proportion in biological samples about as often as it was lower, indicating no systematic pattern of over- or undersampling of fish caught by each user group (Table 6).

AGE, LENGTH, AND SEX COMPOSITION (OBJECTIVE 1)

Age Composition

Lingcod harvested in the sport fishery ranged from 3 to 24 years of age (Figure 3, Appendix B1). Males and females of age 24 were observed. The majority of the harvest was in the range of about 8-17 years old. The 89 cm (35 in) minimum size limit in effect at all ports except Kodiak appeared to limit the harvest to mostly fish age 7 and above.

Variability in year-class strength was evident, especially in the Kodiak and Homer harvest, although some of that variability was probably due to small sample sizes. Despite the small sample sizes at these ports, there was fairly consistent progression of strong or weak year classes from year to year. There appeared to be less variability in year-class strength at Seward and Valdez, the ports with the largest sample sizes, and it is more difficult to follow progression of strong or weak year classes over time in those bubble plots. Ageing errors undoubtedly masked variability in year-class strength and contributed to inconsistencies in progression of modal or weak age classes.

One consistent trend across all ports was a general increase in the age distributions over time. For most ports, the oldest fish in the harvest increased from about 15 years to the low 20s by 2000. There was also a shift in the modal ages: in the early 1990s ages 6-14 made up most of the harvest at Seward and Valdez, but by the early 2000s ages 12-19 made up most of the harvest.

Small sample sizes precluded achievement of the desired level of precision (± 10 percentage points, or $2SE = 0.10$) for several of the estimates at Kodiak, Homer, and Valdez. Standard errors of age class proportions ranged up to 0.114 at Kodiak, 0.112 at Homer, and 0.075 at Valdez (Appendix B1). All Seward and Whittier estimates, and most of the Valdez estimates, were within the desired level of precision.

Length Composition

Harvested lingcod ranged from 43 to 142 cm in length, although the length composition was constrained by the 89 cm minimum size limit imposed in 1993 at all ports except Kodiak. Before 1997, up to 27% of the harvest at Homer, 11% at Seward, and 14% at Valdez was composed of sublegal-size fish, although most of these were within 2 cm of the minimum size limit. Compliance with the minimum size limit improved over time. The sublegal portion never exceeded 4% at any port after 1996 (Table 7). Estimates of the proportion of sublegal fish are probably inflated because these fish were often reported by the public, confiscated, and were therefore more likely to be included in the sample.

Trends in length composition reflected trends in age composition. There was consistent progression of modal length classes over time, and a shift toward generally larger fish from 1993 to 2002 at most ports (Figure 4, Appendix B2).

Small sample sizes also prevented reaching the desired level of precision for many of the length composition estimates. However, the maximum standard errors were under 0.05 every year at Seward, 6 of 10 years at Kodiak, and 7 of 10 years at Valdez (Appendix B2).

Sex Composition

Females made up 56% to 93% of the sport harvest each year at all ports except Kodiak (Figure 5). In the Kodiak fishery, females only made up 22%-62% of the harvest, with the peak in 1997. Sex composition was variable but without any strong trend at Homer, Seward, and Valdez. The percentage of females declined from 93% in 1999 to 61% in 2002 at Whittier.

Standard errors of sex composition estimates for Seward and Whittier ranged from 0.022-0.047 (Appendix B3). The error bounds of these estimates (approximately two standard errors) were therefore within the desired target level of precision of 0.10 each year. Target levels of precision were also met in Valdez in 7 of 10 years, in Homer 4 years (1999-2002), and only 2 years in Kodiak (1994 and 1995).

SPATIAL DISTRIBUTION OF EFFORT AND HARVEST (OBJECTIVE 2)

Estimates of the spatial distribution of lingcod harvest are based on the total reported harvest of 5,340 lingcod from all interviews. Only interviews conducted on or after July 1 and with target species coded as “lingcod only,” “bottomfish,” or “bottomfish and salmon,” were used to estimate the spatial distribution of effort by each user group. This subset of 2,536 interviews accounted for 12,122 angler-days of effort. At some ports and years, estimates of the spatial distribution of effort and harvest were based on very small sample sizes. Occasionally, no lingcod were reported harvested by any interviewed private anglers. The small sample sizes were reflective of minor harvests, and were partly caused by differences from year to year in how technicians characterized the target categories based on interview responses. Despite the small sample sizes, estimates and standard errors are presented for all years because the time series for each port show fairly consistent spatial patterns and are informative about general trends, especially in harvest.

Caution must also be used when interpreting the following estimates because they are the proportions of effort or harvest in each stat area, not the absolute levels. For example, an increase in the proportion of harvest in a stat area from one year to the next does not necessarily indicate an increase in harvest. Also, because the spatial distribution of effort and harvest are based on different data sets (one a subset of the other), it is not appropriate to relate the proportions of harvest and effort in each stat area to make inferences about abundance. The effective effort for lingcod is an unknown and variable component of the total effort.

Kodiak

Anglers interviewed in Kodiak reported a total of 4,011 angler-days of combined lingcod and bottomfish effort, and reported harvesting 989 lingcod during the period 1993-2002 (Appendices B4 and B5). Only 40 angler-days of exclusive lingcod effort were recorded in interviews. Chiniak Bay (stat area 525733) accounted for 61%-100% of the charter effort and 57%-89% of private effort during the period (Figures 6 and 7). Stat areas 525731 and 525701, just north and south of Chiniak Bay, received lesser amounts of effort. There was substantial private effort in stat area 525731, but much of this was from anglers fishing just over the boundary line separating this area from stat area 525733. Harvest was distributed similarly to effort, with the majority of charter and private lingcod taken from Chiniak Bay (Figures 8 and 9). There were no apparent trends in the distribution of harvest over the period sampled.

Homer

Anglers interviewed in Homer reported a total of 605 angler-days of combined lingcod and bottomfish effort, and reported harvesting 319 lingcod during the period 1993-2002 (Appendices

B4 and B5). Even though Homer is a major hub of sport fishing activity, effort for lingcod and bottomfish was relatively low because most interviewed anglers reported halibut as the exclusive target species. Only 2 angler-days of effort exclusively for lingcod were reported by interviewed anglers. Charter effort for lingcod and bottomfish was distributed throughout outer Kachemak Bay and lower Cook Inlet as far south as the Barren Islands and as far east as Rocky Bay (Figure 10). There was an increase in the proportion of lingcod and bottomfish effort in the Chugach Islands area (stat areas 515903 and 515905) and in stat area 525902 during the years 1999-2002. Private effort for lingcod and bottomfish was spread over a slightly smaller area, but was concentrated in Kachemak Bay (Figure 11). The proportions of charter and private effort in any stat area were highly variable from year to year.

Nearly all lingcod harvest by charter and private anglers was from the outer waters of Cook Inlet, around the Barren and Chugach islands (Figures 12 and 13). The private harvest distribution estimates are based on extremely small sample sizes and have low precision, but are presented because they are consistent with the charter distribution over the entire time series.

Seward

Anglers interviewed in Seward reported 5,309 angler-days of combined lingcod and bottomfish effort, and reported harvesting 2,040 lingcod during the period 1993-2002 (Appendices B4 and B5). Effort specifically for lingcod only accounted for 117 angler-days. Charter effort (including military charter vessel effort after 2000) was spread from Nuka Island in the west to the outside of Montague Island in the east (Figure 14). There was substantial annual variation in the proportion of harvest in any stat area. Private effort was concentrated in stat areas 495932 and 495938, encompassing Day Harbor, outer Resurrection Bay, and the Cape Aialik-Chiswell Islands areas (Figure 15). This distribution was consistent with smaller boats and shorter trips typical of the private fleet. Military effort during the period 1995-2000 was also concentrated in the Cape Aialik-Chiswell Islands area (Figure 16). The distribution of military effort was due in large part to Army camp restrictions placed on the range of their small boat fleet.

Charter harvest was distributed widely from Nuka Island to waters south of Montague Island (Figure 17). Despite this wide distribution, harvest was essentially concentrated in the Chiswell Islands area (stat areas 495932 and 495934) and waters around Montague Strait and Cape Cleare. Private harvest was distributed similarly to private effort, with the majority in stat areas 495932 and 485838 (Figure 18). Military harvest during the period 1995-2000 was primarily from the Chiswell Islands (stat area 495932) with a spike in harvest (69%) from Cape Cleare in 2000 (Figure 19). Given that Resurrection Bay was closed to lingcod harvest inside a line from the tip of Cape Resurrection to the tip of Cape Aialik, most of the private and military harvest in stat areas 495938 probably came from waters east of Cape Resurrection outside the closure, and most of the harvest from stat area 495932 probably came from waters south of Cape Aialik. No strong trends are apparent in the distribution of charter, private, or military proportions of harvest.

Whittier

Anglers interviewed in Whittier from 1998-2002 reported a total of 842 angler-days of combined lingcod and bottomfish effort, and reported harvesting 566 lingcod (Appendices B4 and B5). No effort was recorded for the target category “lingcod” in any year. In addition, no effort was coded to the “bottomfish” or “bottomfish+salmon” target categories in 1999, likely a procedural error by the port sampler. Charter bottomfish effort was distributed mostly in northwestern PWS, with small proportions of effort as far south as Montague Strait and as far east as Hinchinbrook Entrance (Figure 20). Private effort was also generally concentrated in the

northwestern part of the sound, with smaller proportions in some parts of the southwestern sound (Figure 21).

Charter harvest by the Whittier fleet was concentrated in Hinchinbrook Entrance and the southwestern sound. Stat area 466002, near Seal Rocks, accounted for 22%-42% of the charter harvest from 1999 to 2002 (Figure 22). Since there was little bottomfish effort recorded in these areas, most charter-caught lingcod were probably taken incidental to the halibut fishery. Private harvest was scattered around the western sound and as far east as Hinchinbrook Entrance (Figure 23). Interview sample sizes were very small, however, with a total of only 36 lingcod reported harvested from 1999 to 2002, so the precision of these estimates is low.

Valdez

Anglers interviewed in Valdez reported a total of 1,272 angler-days of combined lingcod and bottomfish effort, and reported harvesting 1,396 lingcod during the period 1993-2002 (Appendices B4 and B5). The vast majority of the effort was in the “bottomfish” target category, with no charter effort and only 5 angler-days of private effort specifically on lingcod. No charter effort targeted on lingcod or bottomfish was recorded in 2002. Charter effort for bottomfish was widely distributed and highly variable from year to year (Figure 24). Private effort for bottomfish and lingcod was concentrated in the northeastern sound, with stat areas 466033 (Bligh Island, Port Fidalgo) and 466100 (Valdez Arm) accounting for the majority (Figure 25).

Charter lingcod harvest was concentrated around Seal Rocks (stat area 466002), Hinchinbrook Entrance, and the outer coasts of Hinchinbrook and Montague islands (Figure 26). The charter fleet increased effort in waters around Wessels Reef in the late 1990s, and by 2002 stat area 465932 accounted for 38% of the charter harvest (Appendix B5). Private lingcod harvest was also found in these areas most years, but also in inner waters of the eastern sound (Figure 27). Again, there was quite a bit of annual variation in the distribution of private lingcod harvest, probably due to small sample sizes.

Cordova

Anglers interviewed in Cordova in 1999 reported a total of 83 angler-days of combined lingcod and bottomfish effort and a harvest of 5 lingcod. Charter effort was mostly in Orca Bay, or stat area 466031 (66%), with smaller amounts in stat areas 456003 and 456031 (Appendix B4). Private effort was all in Orca Inlet, or stat areas 456031, 456032, and 466031. Of the five harvested lingcod, three were from stat area 466031 (Orca Bay) and the other two were from 466031 (west side Hinchinbrook Island).

DISCUSSION

The standard errors of many of the estimates were relatively high due to small sample sizes. Small samples were the result of the combination of limited sampling effort (a single sampler in each port with multiple sampling objectives) and the fact that lingcod harvest is low relative to other species. Collecting lingcod on interview days boosted sample sizes for ports where that could be done. Another contributing factor to low sample sizes was the possibility that some lingcod were cleaned and carcasses disposed of before they were landed. The incidence of cleaning at sea was not estimated, however. Small sample sizes will likely continue to be an issue unless sampling effort is increased either through improvement to the sampling design, an increase in sampling effort (manpower), or a mandatory landing requirement. If there is a

critical need for additional data, the department could exercise its emergency order authority to require landing whole lingcod for purposes of improved data collection.

The 89 cm minimum size limit in effect in all areas except Kodiak undoubtedly had an effect on many of the estimates. Females dominated the harvest at all ports with a minimum size limit in place. This was due, at least in part, to the higher growth rate and greater asymptotic length for females (e.g., Cass et al. 1990). Selective harvest of large fish would result in more females. In a 1998 jig survey near the Chiswell Islands, very few males over 105 cm were caught, while 105 cm was the modal length category for females (Bethe and Meyer 2002). The minimum size limit had apparent effects on length and age composition, compromising the utility of these estimates to make inferences regarding recruitment. Length data from waters with minimum size limits are presumed to be biased toward the larger fish of each age and should not be used for modeling growth.

Age and length composition of the harvest increased since the mid-1990s at most ports. There are several possible explanations that may be acting in combination. One possibility is that recruitment has been insufficient to maintain a stable age and size structure, either because recruitment declined or because previous recruitments were exceptionally large. A second possibility is that the minimum size limit and reduced bag limits increased the survival rate of cohorts entering the fishery since 1993, and the population is now “top-heavy.” Another is that the fishery has become increasingly selective for large lingcod. While there are little data available to sort out the recruitment scenarios, there is some support for the changing selectivity scenario. Many charter operations are trying to diversify their operations by offering “combo” trips. While this typically involves fishing for salmon and halibut, some are targeting other species as part of the package. With a bag limit of only one or two lingcod and a minimum size limit of 89 cm in most areas, anglers can be very selective about the sizes of fish they retain. The high numbers of released fish (Figure 2) suggest ample opportunity to be selective.

The ADF&G Trophy Fish Program probably contributed to development of lingcod as a trophy species. During the period 1992-2001 the minimum qualifying weight for a lingcod Trophy Fish certificate was 45 pounds (20.4 kg). This was an easily attainable weight, and lingcod received increasing attention in the media as a trophy fish. The number of lingcod trophy certificates issued for fish taken in Southcentral Alaska (excluding undeterminable locations) increased from about 25 per year in the early 1990s to 93 in 2000, then dropped to 62 in 2001. In 2002 the qualifying weight was increased to 55 lb (24.9 kg), and only 25 certificates were issued for Southcentral Alaska waters. The average weight of Southcentral region trophy-certified lingcod has increased steadily from 44.5 lb (20.2 kg) in 1986 to 59.2 lb (26.8 kg) in 2002.

Changes over time in the methods of fin sectioning and age determination likely resulted in ages that were biased low, especially before 1999. The bias is suspected to be about 1-2 years. There were also a number of different age readers, which likely resulted in changes over time in the variability of assigned ages. All of these problems could compromise efforts to use age-structured models to assess the stock. All available age data and precision tests should be summarized and thoroughly reviewed, and if possible, fin sections should be re-aged prior to using in a stock assessment.

Estimates of the spatial distribution of angler effort for lingcod are probably not very useful considering the difficulties in defining lingcod effort. It was simply not practical and often not possible to separate effort for lingcod when a mixed effort (target=bottomfish) trip was taken.

Just as commonly, when the target species category was recorded as “bottomfish” there may have been no effort directed specifically at lingcod, or the effort may have been ineffective for lingcod. Therefore, it would be inappropriate to draw conclusions by comparing the proportions of effort and harvest across stat areas. For example, areas with a high proportion of effort but low proportions of harvest are not likely to be locally depleted of lingcod. In most cases they simply are not good lingcod habitat.

Estimates of the spatial distribution of harvest, however, are not compromised by assumptions about the target category and are presumably more accurate than the estimates of effort distribution. These estimates, however, apply only to the charter and private fleets from the sampled ports. Since the various ports and user groups were sampled with varying levels of efficiency, the data cannot be simply combined to obtain overall estimates of the spatial distribution of harvest. They will instead need to be weighted by estimates of relative levels of harvest, and some liberal assumptions will have to be made concerning harvest at unsampled ports.

As noted in the introduction, there are no specific objectives for the recreational lingcod fishery in Southcentral Alaska and there is no ongoing fishery-independent survey that provides an index of trends in stock abundance or biomass. An immediate issue for managers is whether the present regulations, which have been in place since 1993, are sufficient to provide for rebuilding and long-term sustained harvest under a sporadic recruitment scenario. The 1998 jig survey could not substantiate persistent anecdotal reports of significant increases in lingcod in Resurrection Bay. Also, there is a question of whether the current minimum size limit is an optimum strategy for enhancing recruitment since it focuses removals on large females.

All stakeholders would benefit from development of a harvest strategy that takes into account the life history of lingcod, provides for sustained yield, and serves as a basis for future management decisions. The data in this report, combined with data from earlier studies (e.g., Meyer 1992, 1993; Vincent-Lang 1991), represent a considerable time series of information on age, length, and sex composition, as well as catch and harvest rates and spatial data from the sport fishery. These data are being integrated with harvest estimates for the sport and commercial fisheries and any other available lingcod data in the region in an analytical assessment of lingcod abundance. A modeling approach is perhaps the most efficient use of available data and should at least identify data gaps and guide future data collection. Even if the fishery data are unsuitable for estimating abundance trends, they can serve as the basis for simulations to evaluate alternative harvest strategies.

ACKNOWLEDGEMENTS

Numerous ADF&G technicians worked hard to collect the data in this report, including Cathy Coon, Anna Stevens, Jennifer Jones, Don Malherrek, Tonya Brockman, Ryan Boudreau, Patti Crandall, Keri Chaplinski, Michael Parish, Philip Cowan, William Romberg, Alan Heckart, Charlie Stock, Grace Thornton, Adele Virg-In, Matt Kinney, Jan Peloskey-Bullock, Justin Ainsworth, Shannon Williams, Lana Davis, Shane Hertzog, Pamela Humphreys, Aaron Sandone, and Charles Warren Hill. Matthew Miller, Rick Gustin, Charlie Stock, and Philip Cowan aged lingcod finrays. Biometricalians James Hasbrouck and Patricia Hansen assisted with planning and data analysis. Supervisors Doug-Vincent-Lang, Robert Clark, Craig Whitmore, and Dan Sharp were supportive throughout the process.

This project would not have been possible without the cooperation and expertise of the Army and Air Force military recreation camps in Seward, the various city harbormasters throughout the region, and finally, the vast majority of charter operators and angling public that provided fish and interview information.

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TABLES

Table 1.-Statewide harvest survey estimates of lingcod sport harvest (numbers of fish) by management area, 1991-2002.

Year	Kodiak ^a	Cook Inlet	North Gulf	PWS	Total
1991	1,352	2,775	6,192	1,979	12,298
1992	1,454	3,199	8,081	2,575	15,309
1993	922	1,681	3,079	2,008	7,690
1994	1,014	1,240	3,712	1,658	7,624
1995	932	1,147	2,619	2,316	7,014
1996	1,074	2,205	2,630	2,035	7,944
1997	1,277	2,235	2,746	3,588	9,846
1998	1,322	1,456	2,188	2,260	7,226
1999	1,726	1,298	3,349	1,913	8,286
2000	1,966	1,814	5,270	3,044	12,094
2001	1,530	1,987	3,693	3,112	10,322
2002	1,099	1,600	4,163	3,423	10,285

^a Does not includes lingcod harvest in the Alaska Peninsula or Aleutian Islands areas.

Table 2.-Dates of port sampling for collection of lingcod and other groundfish harvest statistics, 1993-2002.

Year	Kodiak	Homer	Seward	Valdez	Whittier ^a	Cordova ^b
1993	5/26 - 9/08	5/26 - 9/12	5/27 - 9/12	5/27 - 9/08		
1994	5/26 - 9/12	5/26 - 9/13	5/26 - 9/10	5/28 - 9/05		
1995	5/22 - 9/12	5/16 - 9/08	5/25 - 9/08	5/25 - 9/03		
1996	5/30 - 8/27	5/20 - 9/12	6/13 - 9/15	5/25 - 9/07		
1997	5/22 - 8/26	5/16 - 9/14	5/24 - 9/13	5/24 - 9/05		
1998	5/21 - 9/07	5/18 - 9/07	6/04 - 9/07	6/26 - 9/06	8/03 - 9/07	
1999	5/21 - 9/07	5/17 - 9/10	5/27 - 9/06	5/27 - 9/06	5/29 - 9/06	6/26 - 8/31
2000	5/25 - 9/04	5/18 - 9/10	5/25 - 9/04	6/01 - 9/04	6/03 - 9/04	
2001	5/24 - 9/03	5/16 - 9/03	5/24 - 9/03	5/29 - 9/03	5/24 - 9/03	
2002	6/08 - 9/02	5/16 - 9/02	6/06 - 9/02	5/29 - 9/03	5/31 - 9/02	

^a Sampling was not conducted in Whittier before 1998.

^b Sampling was conducted in Cordova in 1999 only.

Table 3.-Numbers of lingcod sampled from the recreational harvest for biological characteristics, by port and user, 1993-2002.

Year	Kodiak				Homer				Seward					Whittier ^b			
	Char	Priv	Unkn	Total	Char	Priv	Unkn	Total	Char	Priv	Mil	Unkn	Total	Char	Priv	Unkn	Total
1993	22	11	43	76	19	0	0	19	65	30	198	34	327				
1994	37	21	56	114	30	0	0	30	198	33	195	13	439				
1995	48	21	57	126	16	0	0	16	110	48	143	14	315				
1996	58	6	13	77	40	2	0	42	67	11	26	2	106				
1997	22	4	5	31	22	0	0	22	51	14	8	19	92				
1998	64	15	0	79	43	0	0	43	78	24	45	8	155	0	0	0	0
1999	26	28	7	61	83	12	0	95	188	49	22	2	261	52	2	1	55
2000	46	39	0	85	139	1	0	140	169	33	59	2	263	125	2	0	127
2001	12	16	0	28	79	36	1	116	120	37	^a	0	157	116	0	1	117
2002	10	28	2	40	103	25	0	128	85	10	^a	0	95	105	4	0	109
Total	345	189	183	717	574	76	1	651	1,131	289	696	94	2,210	398	8	2	408

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Year	Valdez				Cordova ^c				Grand Total
	Char	Priv	Unkn	Total	Char	Priv	Unkn	Total	
1993	19	0	6	25					447
1994	31	0	3	34					617
1995	43	7	8	58					515
1996	59	1	4	64					289
1997	161	5	1	167					312
1998	171	10	4	185					462
1999	295	28	1	324	3	1	9	13	809
2000	100	52	0	152					767
2001	216	26	2	244					662
2002	272	37	0	309					681
Total	1,367	166	29	1,562	3	1	9	13	5,561

Notes: Char = charter; Priv = private; Unkn = unknown; Mil = military.

^a Lingcod sampled from military vessels were coded as either private or charter in 2001 and 2002 (see text).

^b No sampling conducted in Whittier during 1993-1997.

^c Sampling conducted in Cordova only in 1999.

Table 4.-Number of interviews with vessels targeting halibut or groundfish, or that caught halibut or groundfish targeting other species, 1993-2002.

Year	Kodiak				Homer				Seward				Whittier ^c				
	Char	Priv	Unkn	Total	Char	Priv	Unkn	Total	Char	Priv	Mil	Unkn	Total	Char	Priv	Unkn	Total
1993	75	355	0	430	154	160	0	314	78	234	^a	0	312				
1994	116	379	0	495	291	220	0	511	121	285	3 ^a	0	409				
1995	93	325	1	419	182	145	0	327	180	455	98	0	733				
1996	100	264	0	364	125	138	0	263	62	98	60	0	220				
1997	93	240	5	338	272	207	0	479	55	110	44	0	209				
1998	293	390	0	683	379	235	0	614	108	173	75	0	356	27	38	0	65
1999	119	225	0	344	399	260	0	659	335	325	54	0	714	190	104	0	294
2000	168	281	0	449	394	263	0	657	321	152	52	0	525	122	154	0	276
2001	176	332	0	508	415	282	0	697	323	173	^b	0	496	208	276	0	484
2002	194	465	0	659	348	221	0	569	338	216	^b	0	554	106	229	0	335
Total	1,427	3,256	6	4,689	2,959	2,131	0	5,090	1,921	2,221	386	0	4,528	653	801	0	1,454

Year	Valdez				Cordova ^d				Grand Total
	Char	Priv	Unkn	Total	Char	Priv	Unkn	Total	
1993	190	158	0	348					1,404
1994	210	198	0	408					1,823
1995	164	141	2	307					1,786
1996	139	115	2	256					1,103
1997	174	198	0	372					1,398
1998	128	80	0	208					1,926
1999	243	122	0	365	36	103	0	139	2,515
2000	233	198	0	431					2,338
2001	194	237	0	431					2,616
2002	176	179	0	355					2,472
Total	1,851	1,626	4	3,481	36	103	0	139	19,381

^a Interview procedures did not call for interviewing military vessels before 1995.

^b Military vessels classified as charter (pay) or private (lottery) in 2001 and 2002

^c No sampling conducted in Whittier during 1993-1997.

^d Sampling conducted in Cordova only in 1999.

Table 5.-Effort and lingcod harvest by target category as reported by anglers interviewed during the open lingcod season, 1993-2002.

Target Category	Angler-Days of Effort							Grand Total
	Kodiak	Homer	Seward	Whittier	Valdez	Cordova		
Lingcod	40	2	117	0	5	0		164
Bottomfish	314	194	2,173	613	678	66		4,038
Bottomfish + Salmon	3,719	409	3,046	168	616	17		7,975
Halibut	7,060	17,303	7,932	2,914	10,012	315		45,536
Rockfish	130	11	239	36	62	0		478
Salmon	451	404	3,884	372	296	0		5,407
Salmon Shark	0	0	19	49	46	0		114
Not Recorded	29	6	60	36	6	0		137
Total	11,743	18,329	17,470	4,188	11,721	398		63,849

Target Category	Number of Lingcod Harvested							Grand Total
	Kodiak	Homer	Seward	Whittier	Valdez	Cordova		
Lingcod	29	4	99	0	5	0		137
Bottomfish	92	113	527	124	54	0		910
Bottomfish + Salmon	463	1	389	1	21	0		875
Halibut	325	198	928	440	1,309	5		3,205
Rockfish	24	0	16	0	2	0		42
Salmon	46	0	64	0	2	0		112
Salmon Shark	0	0	7	0	0	0		7
Not Recorded	12	0	12	4	0	0		28
Total	991	316	2,042	569	1,393	5		5,316

^a Whittier sampled 1998-2002 only.

^b Cordova sampled in 1999 only.

Table 6.-Comparisons of the relative proportions of charter- and private-caught lingcod reported harvested in interviews and sampled for biological characteristics.

Data Source	Kodiak				Homer				Seward				Whittier				Valdez				Cordova					
	Charter		Private		Charter		Private		Charter		Private		Military		Charter		Private		Charter		Private		Charter		Private	
	n	p	n	p	n	p	n	p	n	p	n	p	n	p	n	p	n	p	n	p	n	p	n	p	n	p
1993																										
Int.	15	0.58	11	0.42	1	1.00	0	0.00	56	0.44	72	0.56	a	a	c	c	c	c	41	0.93	3	0.07	c	c	c	c
BioSamp.	22	0.67	11	0.33	19	1.00	0	0.00	65	0.22	30	0.10	198	0.68	c	c	c	c	19	1.00	0	0.00	c	c	c	c
1994																										
Int.	48	0.56	37	0.44	8	1.00	0	0.00	201	0.85	36	0.15	a	a	c	c	c	c	42	0.88	6	0.13	c	c	c	c
BioSamp.	37	0.64	21	0.36	30	1.00	0	0.00	198	0.46	33	0.08	195	0.46	c	c	c	c	31	1.00	0	0.00	c	c	c	c
1995																										
Int.	31	0.40	47	0.60	1	0.50	1	0.50	95	0.56	29	0.17	45	0.27	c	c	c	c	91	0.83	18	0.17	c	c	c	c
BioSamp.	48	0.70	21	0.30	16	1.00	0	0.00	110	0.37	48	0.16	143	0.48	c	c	c	c	43	0.86	7	0.14	c	c	c	c
1996																										
Int.	78	0.82	17	0.18	4	0.80	1	0.20	9	0.18	10	0.20	32	0.63	c	c	c	c	132	1.00	0	0.00	c	c	c	c
BioSamp.	58	0.91	6	0.09	40	0.95	2	0.05	67	0.64	11	0.11	26	0.25	c	c	c	c	59	0.98	1	0.02	c	c	c	c
1997																										
Int.	30	0.64	17	0.36	12	1.00	0	0.00	18	0.51	6	0.17	11	0.31	c	c	c	c	176	0.88	24	0.12	c	c	c	c
BioSamp.	22	0.85	4	0.15	22	1.00	0	0.00	51	0.70	14	0.19	8	0.11	c	c	c	c	161	0.97	5	0.03	c	c	c	c
1998																										
Int.	126	0.80	31	0.20	33	1.00	0	0.00	64	0.58	21	0.19	25	0.23	0	0.00	1	1.00	148	0.96	6	0.04	c	c	c	c
BioSamp.	64	0.81	15	0.19	43	1.00	0	0.00	78	0.53	24	0.16	45	0.31	0	0	0	0	171	0.94	10	0.06	c	c	c	c
1999																										
Int.	73	0.76	23	0.24	19	0.83	4	0.17	182	0.73	52	0.21	17	0.07	50	1.00	0	0.00	145	0.95	8	0.05	3	0.60	2	0.40
BioSamp.	26	0.48	28	0.52	83	0.87	12	0.13	188	0.73	49	0.19	22	0.08	52	0.96	2	0.04	295	0.91	28	0.09	3	0.75	1	0.25
2000																										
Int.	91	0.71	38	0.29	114	1.00	0	0.00	374	0.87	31	0.07	26	0.06	153	0.98	3	0.02	153	0.92	13	0.08	c	c	c	c
BioSamp.	46	0.54	39	0.46	139	0.99	1	0.01	169	0.65	33	0.13	59	0.23	125	0.98	2	0.02	100	0.66	52	0.34	c	c	c	c
2001																										
Int.	125	0.83	26	0.17	53	0.85	9	0.15	219	0.76	69	0.24	b	b	166	0.88	22	0.12	201	0.93	14	0.07	c	c	c	c
BioSamp.	12	0.43	16	0.57	79	0.69	36	0.31	120	0.76	37	0.24	b	b	116	1.00	0	0.00	216	0.89	26	0.11	c	c	c	c
2002																										
Int.	101	0.78	28	0.22	58	0.98	1	0.02	304	0.89	36	0.11	b	b	163	0.94	11	0.06	164	0.90	18	0.10	c	c	c	c
BioSamp.	10	0.26	28	0.74	103	0.80	25	0.20	85	0.89	10	0.11	b	b	105	0.96	4	0.04	272	0.88	37	0.12	c	c	c	c

Notes: Int. = interviews; BioSamp. = biological sampling.

^a Did not interview military anglers in 1993 and 1994.

^b Military vessels classified as charter (pay) or private (lottery) in 2001 and 2002.

^c Port not sampled.

Table 7.-Estimated percentage of the sport lingcod harvest under the 88.9 cm (35 inch) minimum size limit at Homer, Seward, Valdez, and Whittier, 1993-2002.

Year	Homer		Seward		Valdez		Whittier ^a	
	Percent	SE(%)	Percent	SE(%)	Percent	SE(%)	Percent	SE(%)
1993	26.3	10.4	10.7	1.7	12.0	6.6		
1994	7.1	5.0	4.7	1.0	12.5	5.9		
1995	26.7	11.8	7.4	1.5	13.8	4.6		
1996	7.3	4.1	0.0	-	4.8	2.7		
1997	0.0	-	2.2	1.5	1.8	1.0		
1998	2.3	2.3	3.9	1.6	1.6	0.9	0.0	-
1999	0.0	-	4.2	1.3	3.1	1.0	0.0	-
2000	0.7	0.7	2.7	1.0	0.7	0.7	0.8	0.8
2001	0.0	-	3.8	1.5	0.4	0.4	2.6	1.5
2002	3.2	1.6	0.0	-	0.6	0.5	0.0	-

^a No lingcod sampling conducted in Whittier 1993-1997.

FIGURES

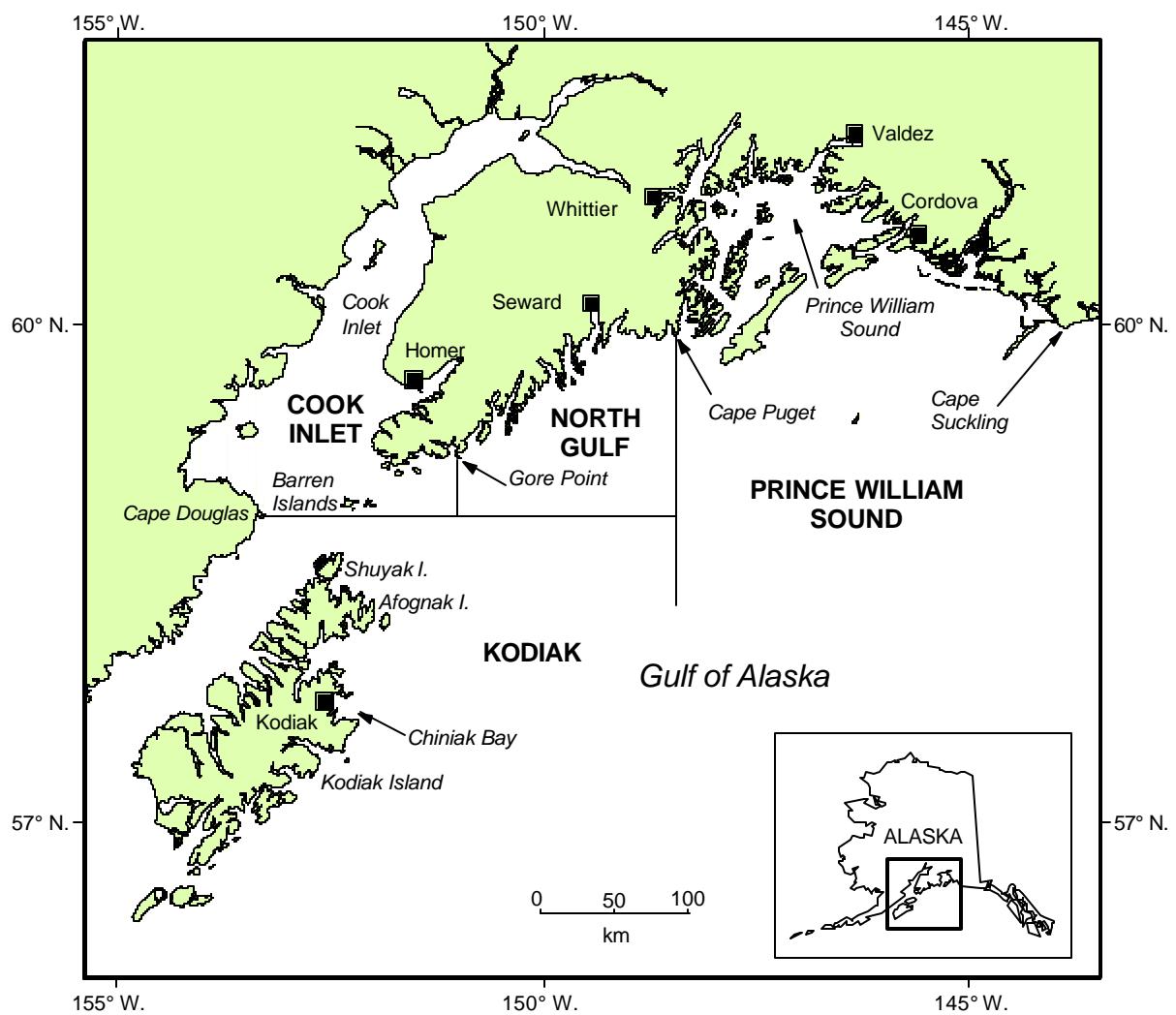


Figure 1.-The northern Gulf of Alaska region, including sampled ports (squares) and management areas (bold text) for recreational lingcod fishery statistics.

No. of Fish

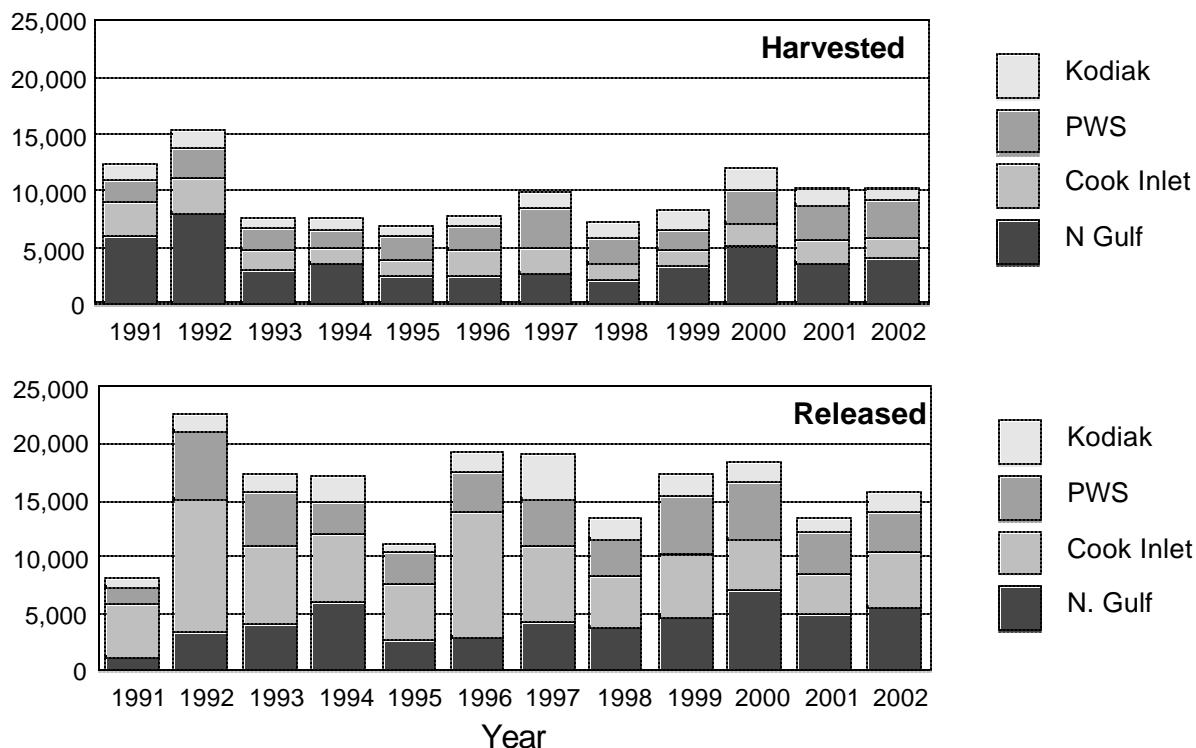
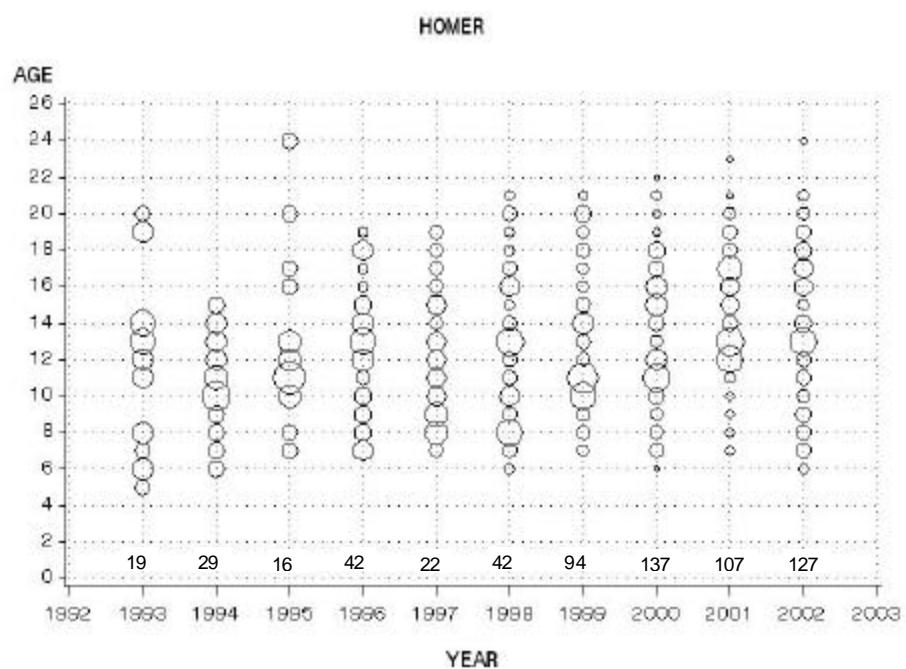
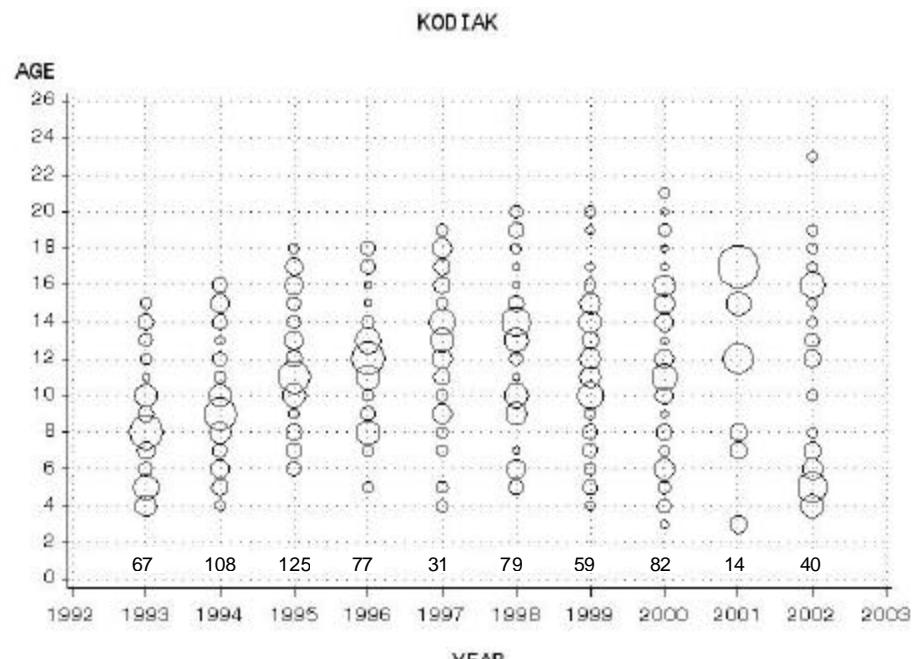


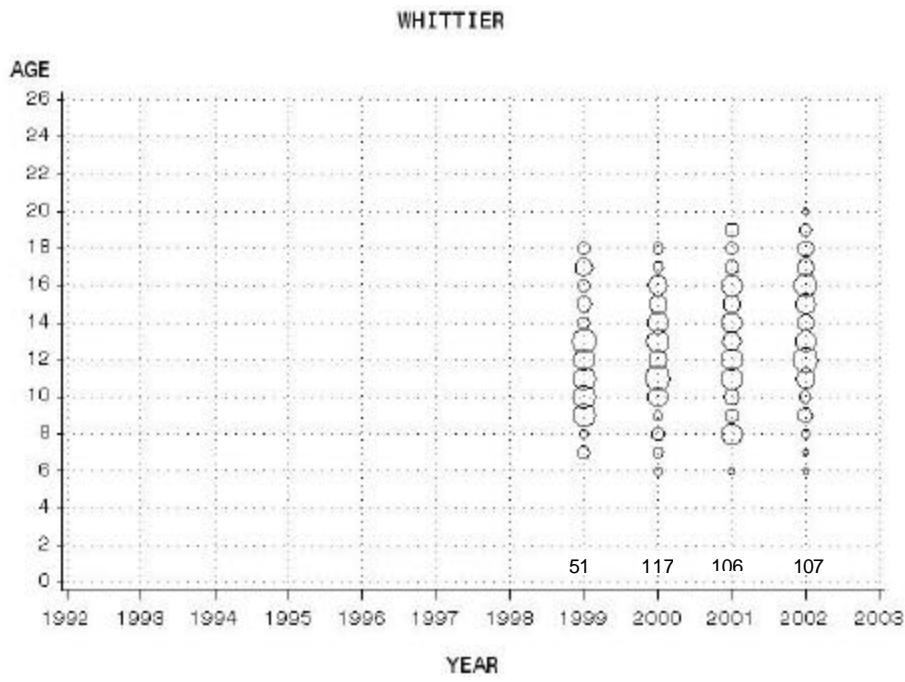
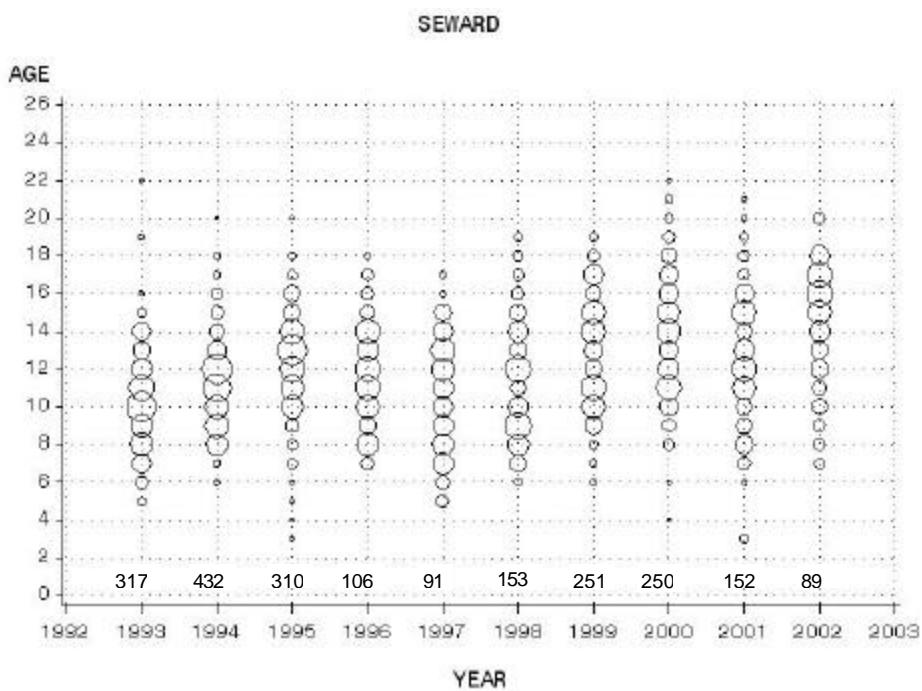
Figure 2.-Statewide harvest survey estimates of the numbers of lingcod harvested and released in Southcentral Alaska recreational fisheries, 1991-2002.



Note: Bubble diameters are proportional to the percentage of fish harvested in each age group each year. Total sample sizes are indicated above the horizontal axis.

Figure 3-Bubble plots of relative age composition of the sport lingcod harvest at Kodiak, Homer, Seward, Whittier, and Valdez, 1993-2000.

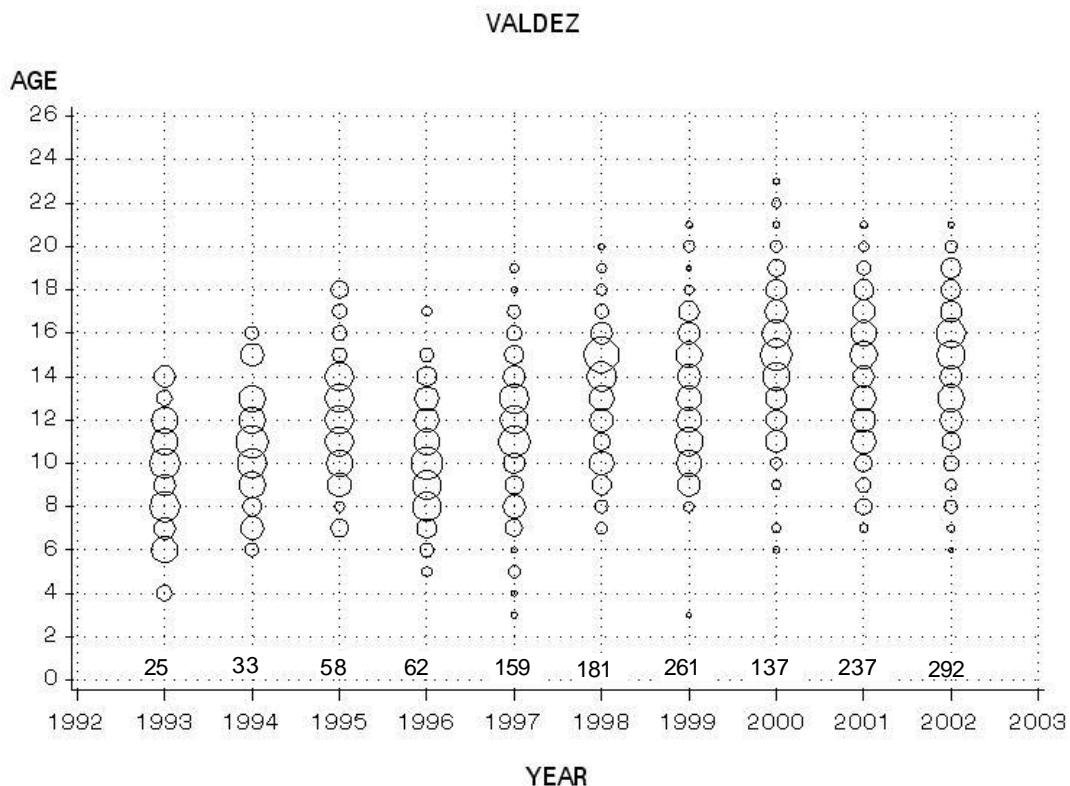
-continued-



Note: Bubble diameters are proportional to the percentage of fish harvested in each age group each year. Total sample sizes are indicated above the horizontal axis.

Figure 3.-Page 2 of 3.

-continued-



Note: Bubble diameters are proportional to the percentage of fish harvested in each age group each year. Total sample sizes are indicated above the horizontal axis.

Figure 3.-Page 3 of 3.

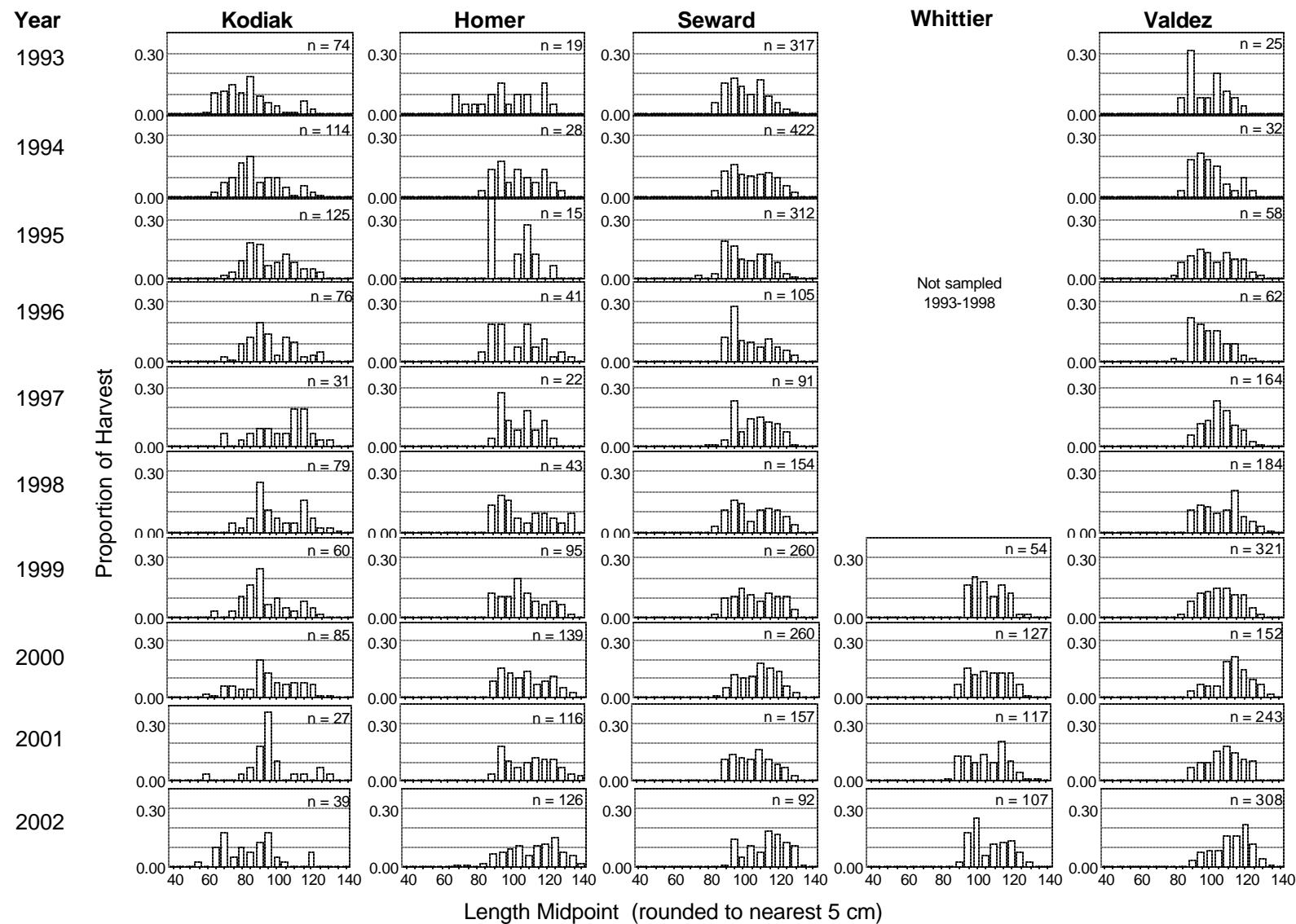


Figure 4.-Length composition of the recreational lingcod harvest sampled at Kodiak, Homer, Seward, Whittier, and Valdez, 1993-2002.

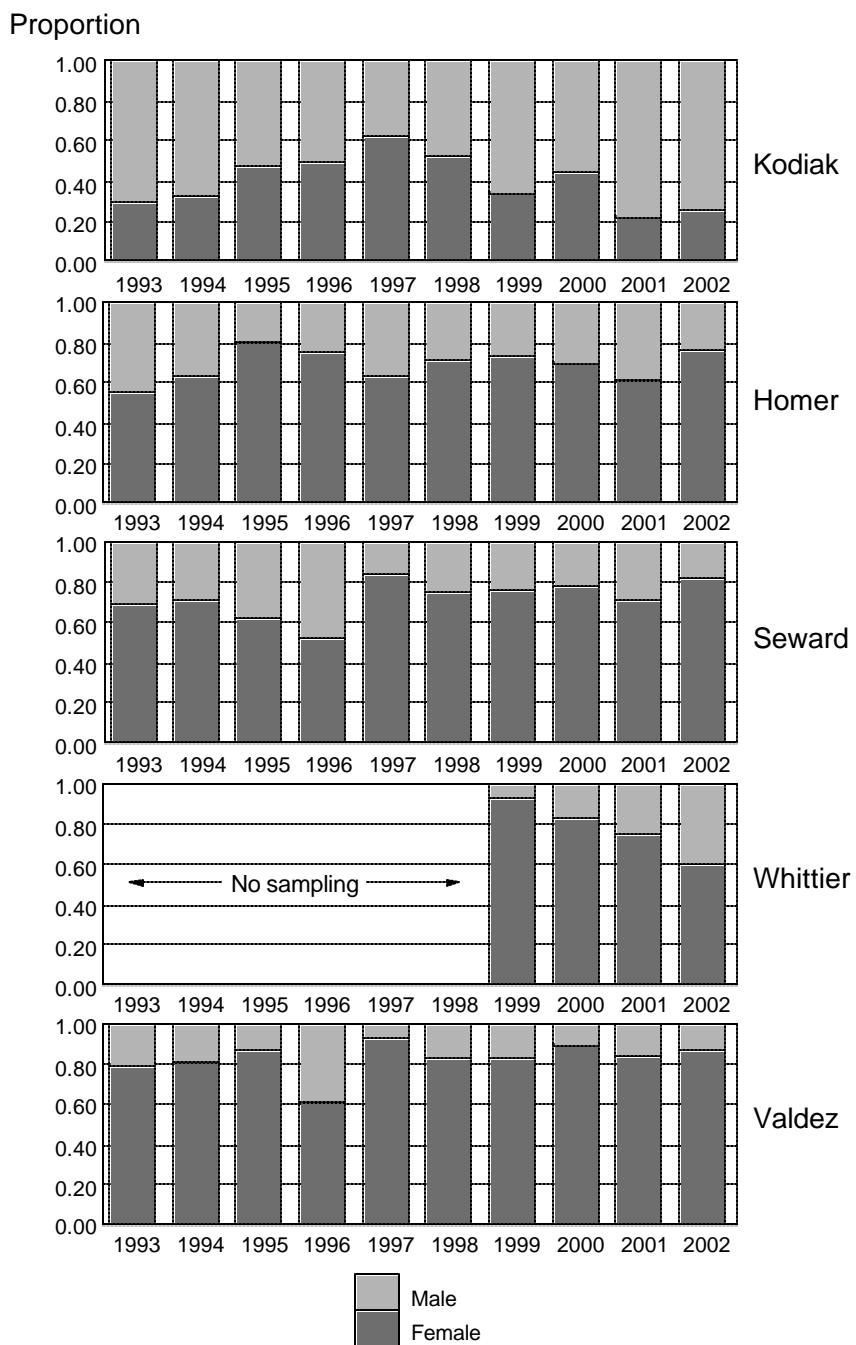
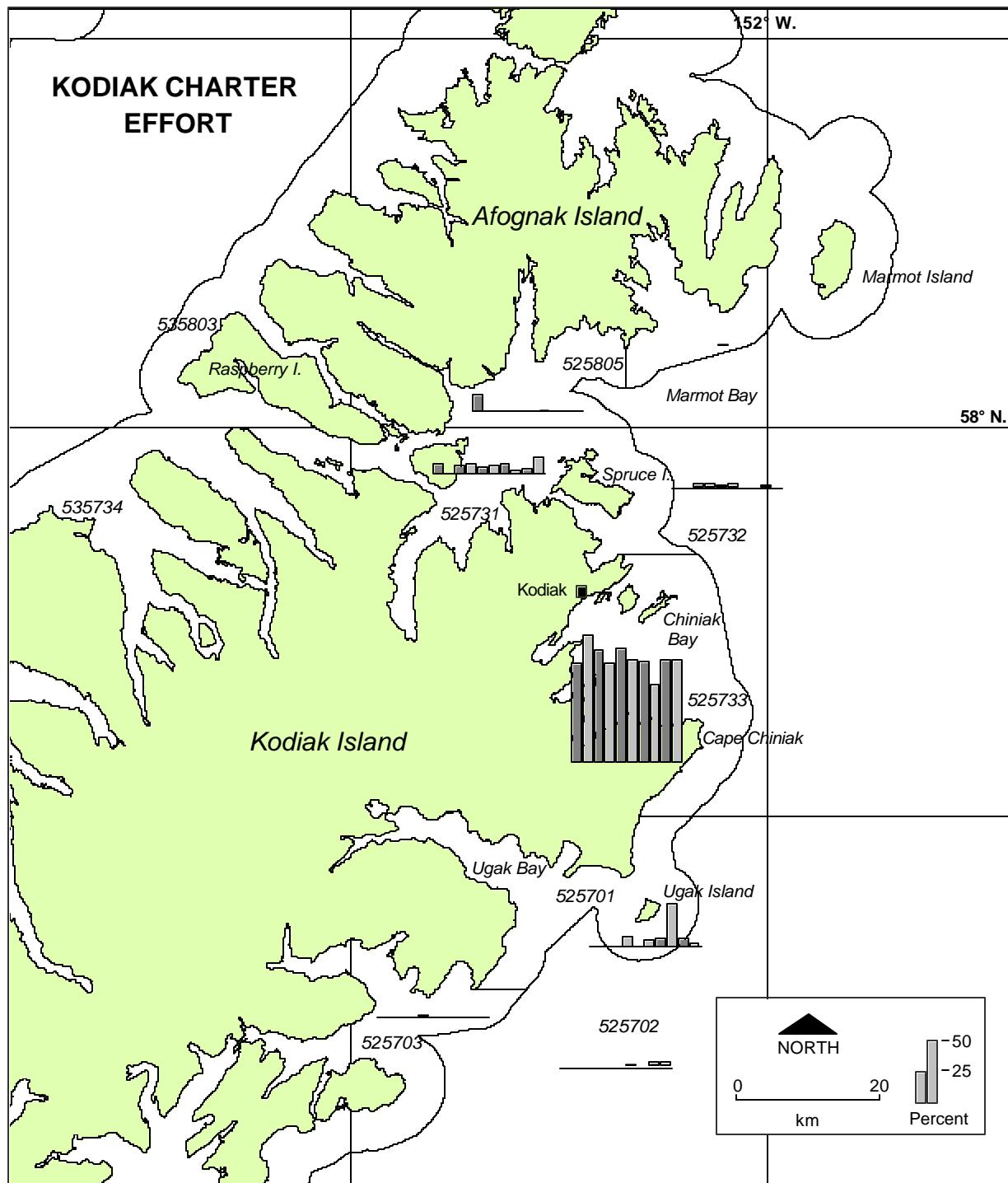
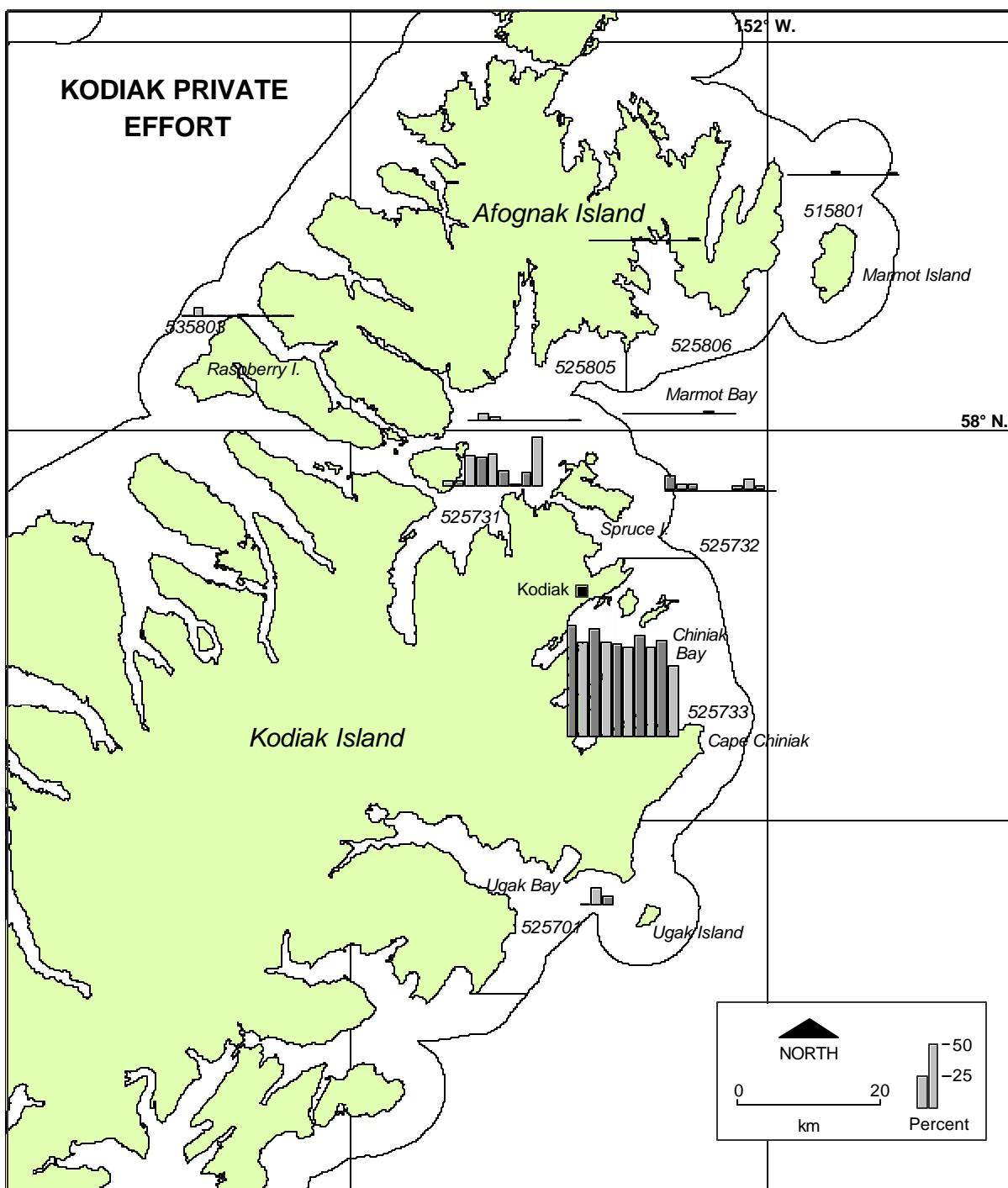


Figure 5.-Estimated sex composition of the sport lingcod harvest landed at Kodiak, Homer, Seward, Whittier, and Valdez, 1993-2002.



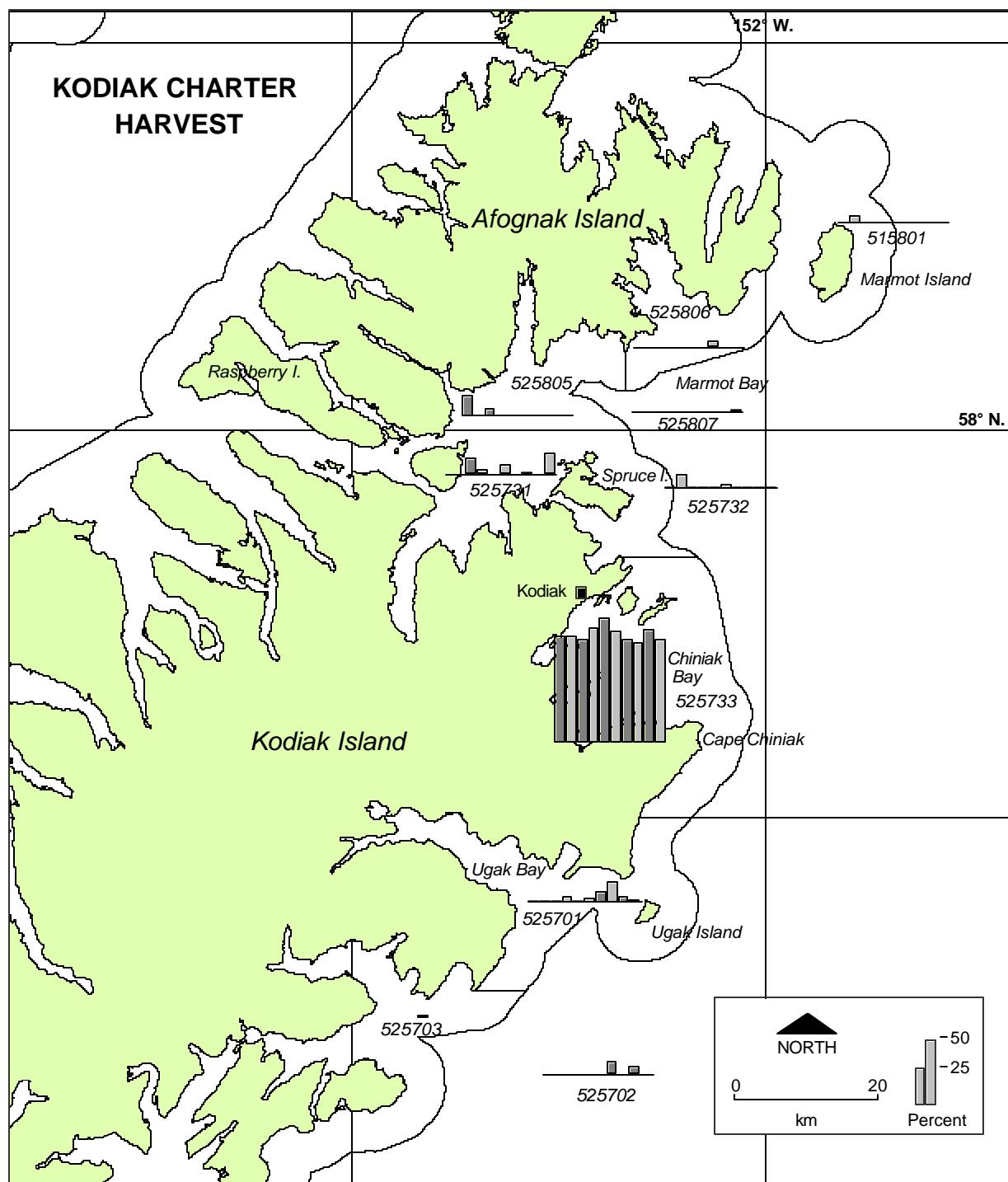
Note: Vertical bars represent the percentage of angler-days in each stat area each year during the period 1993-2002 (bars for odd-numbered years are darker).

Figure 6.-The distribution of sport fishing effort for lingcod (as defined in text) by charter anglers interviewed at Kodiak.



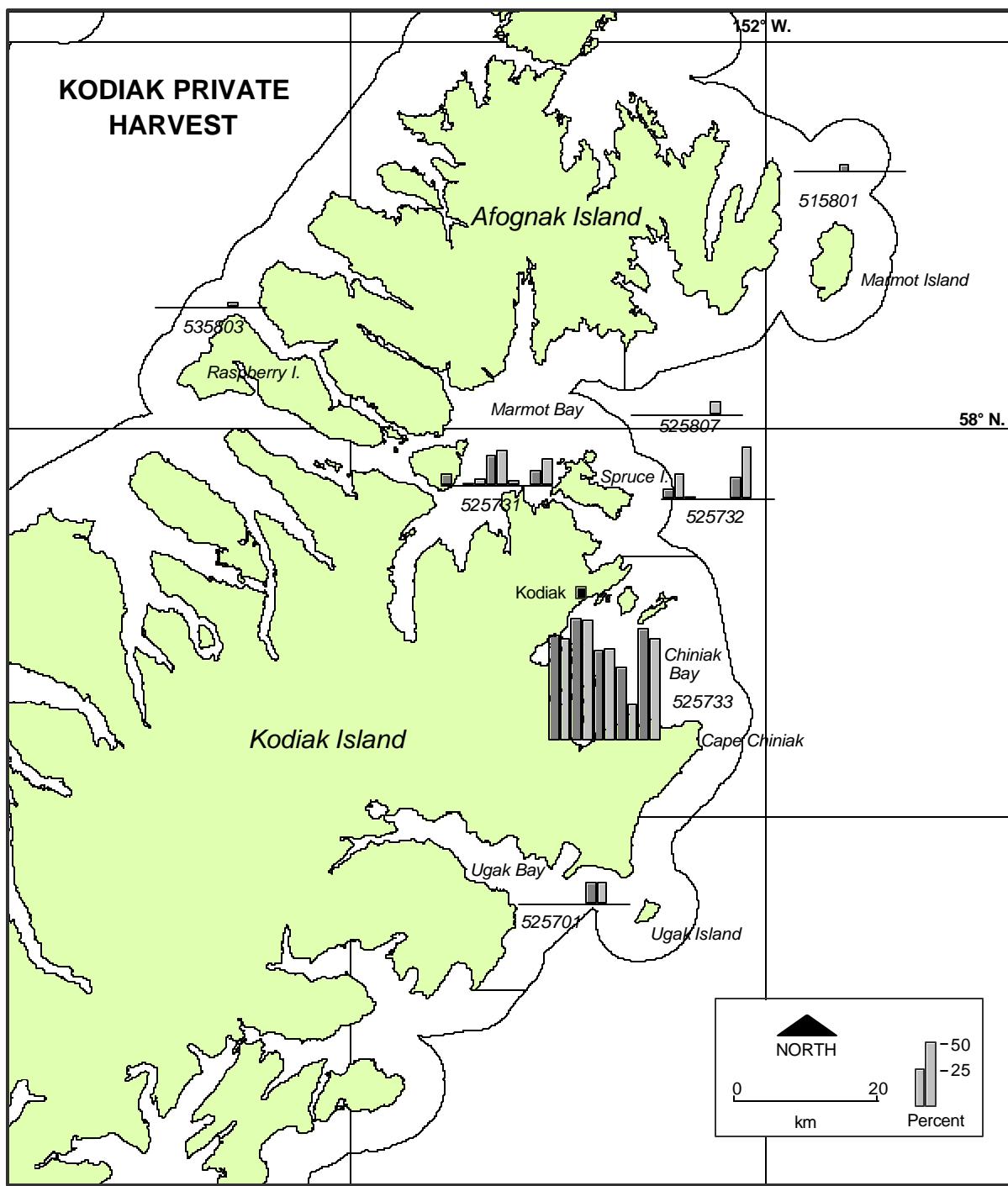
Note: Vertical bars represent the percentage of angler-days in each stat area each year during the period 1993-2002 (bars for odd-numbered years are darker).

Figure 7.-The distribution of sport fishing effort for lingcod (as defined in text) by private anglers interviewed at Kodiak.



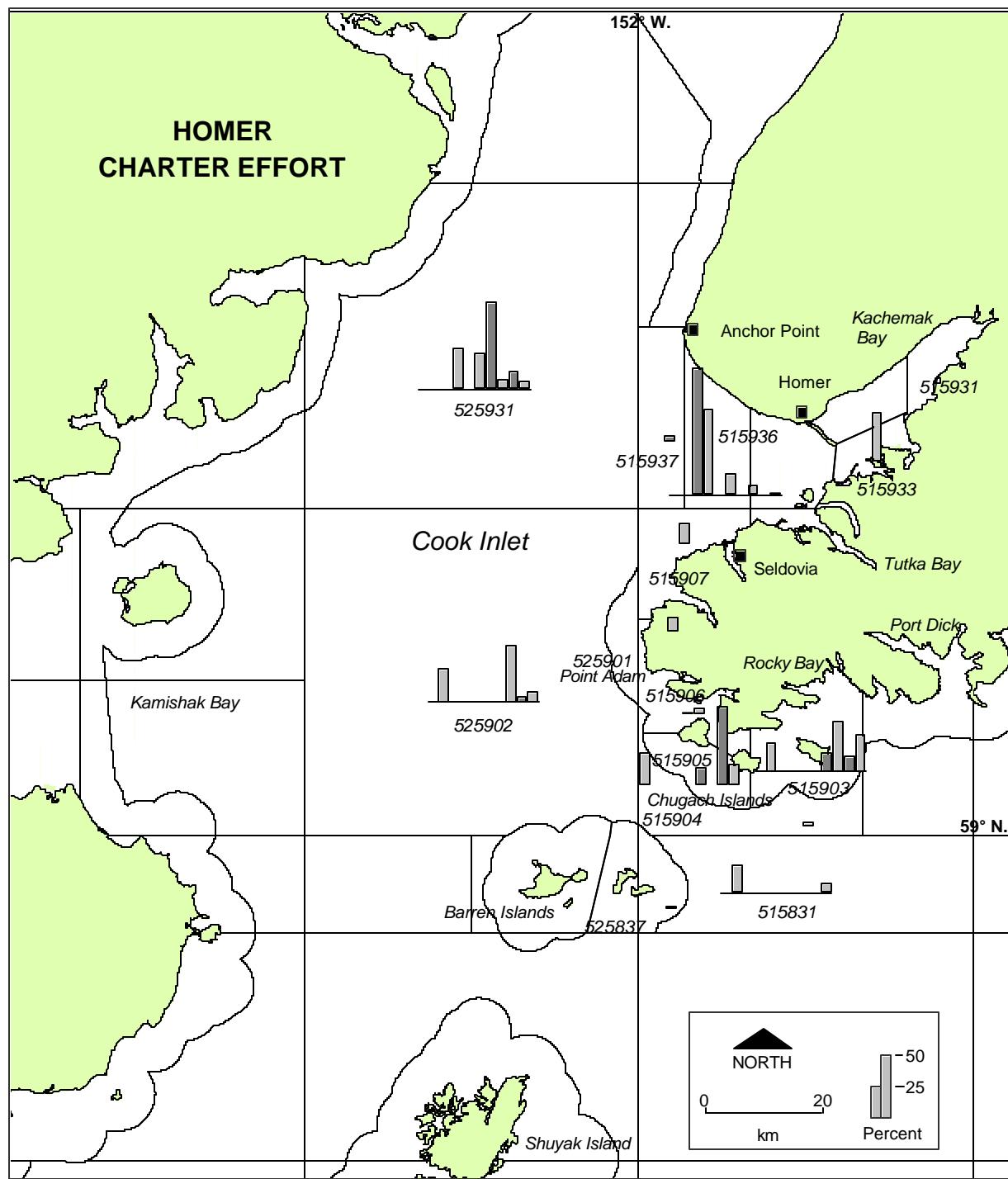
Note: Vertical bars represent the percentage of the harvest (in number) from each stat area each year during the period 1993-2002 (bars for odd-numbered years are darker).

Figure 8.-The distribution of sport lingcod harvest by charter anglers interviewed at Kodiak.



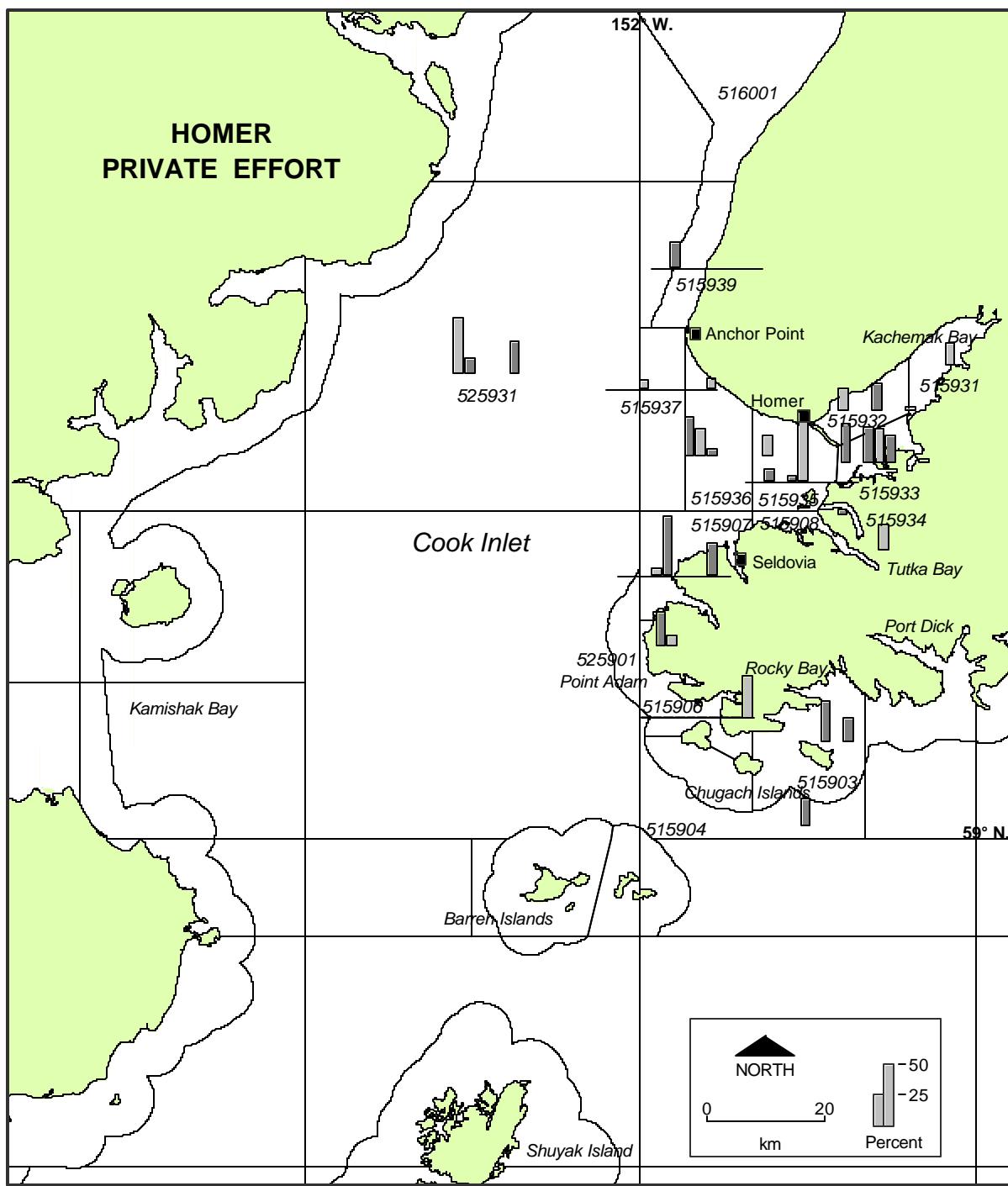
Note: Vertical bars represent the percentage of the harvest (in number) from each stat area each year during the period 1993-2002 (bars for odd-numbered years are darker).

Figure 9.-The distribution of sport lingcod harvest by private anglers interviewed at Kodiak.



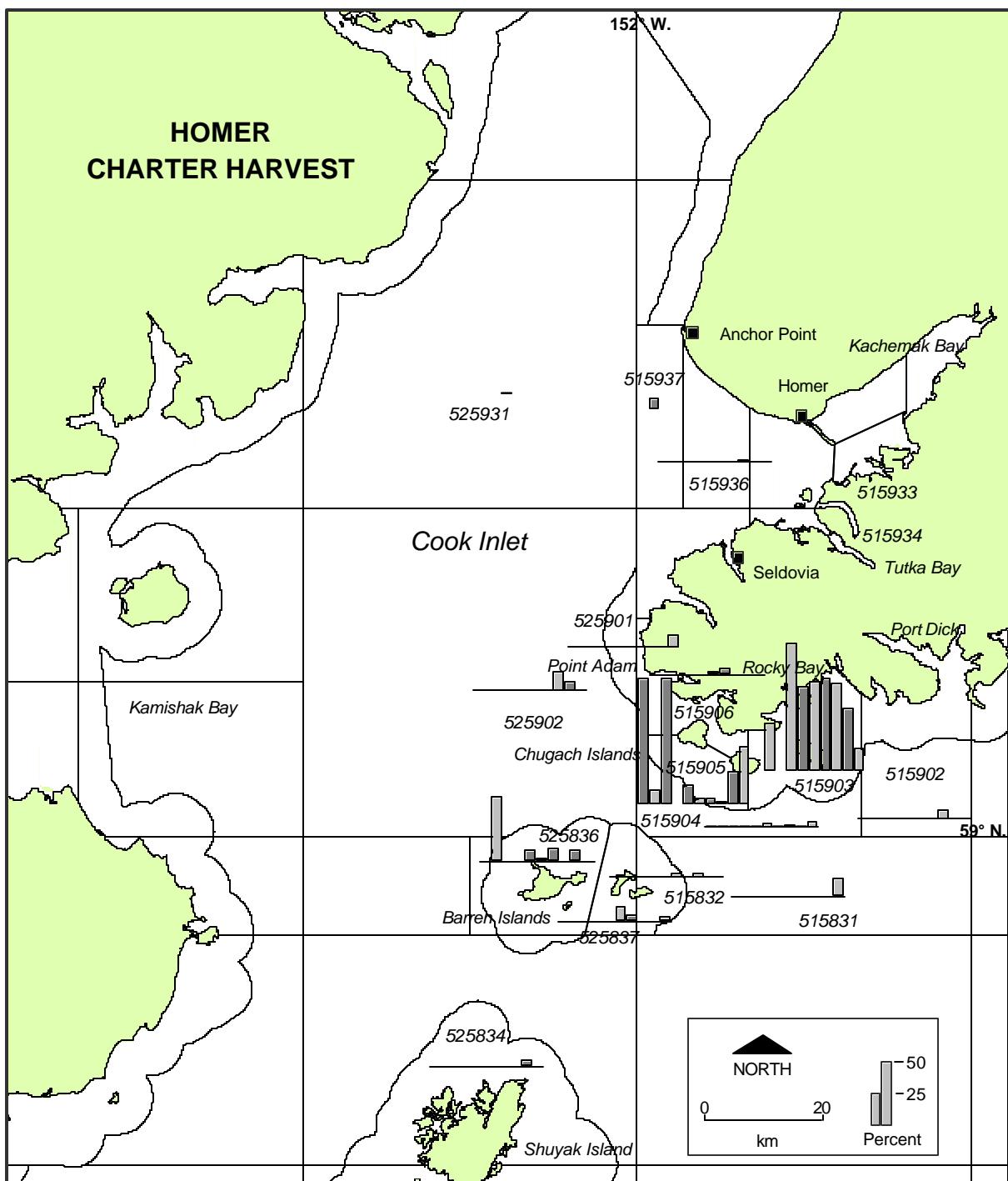
Note: Vertical bars represent the percentage of angler-days in each stat area each year during the period 1993-2002 (bars for odd-numbered years are darker).

Figure 10.-The distribution of sport fishing effort for lingcod (as defined in text) by charter anglers interviewed at Homer.



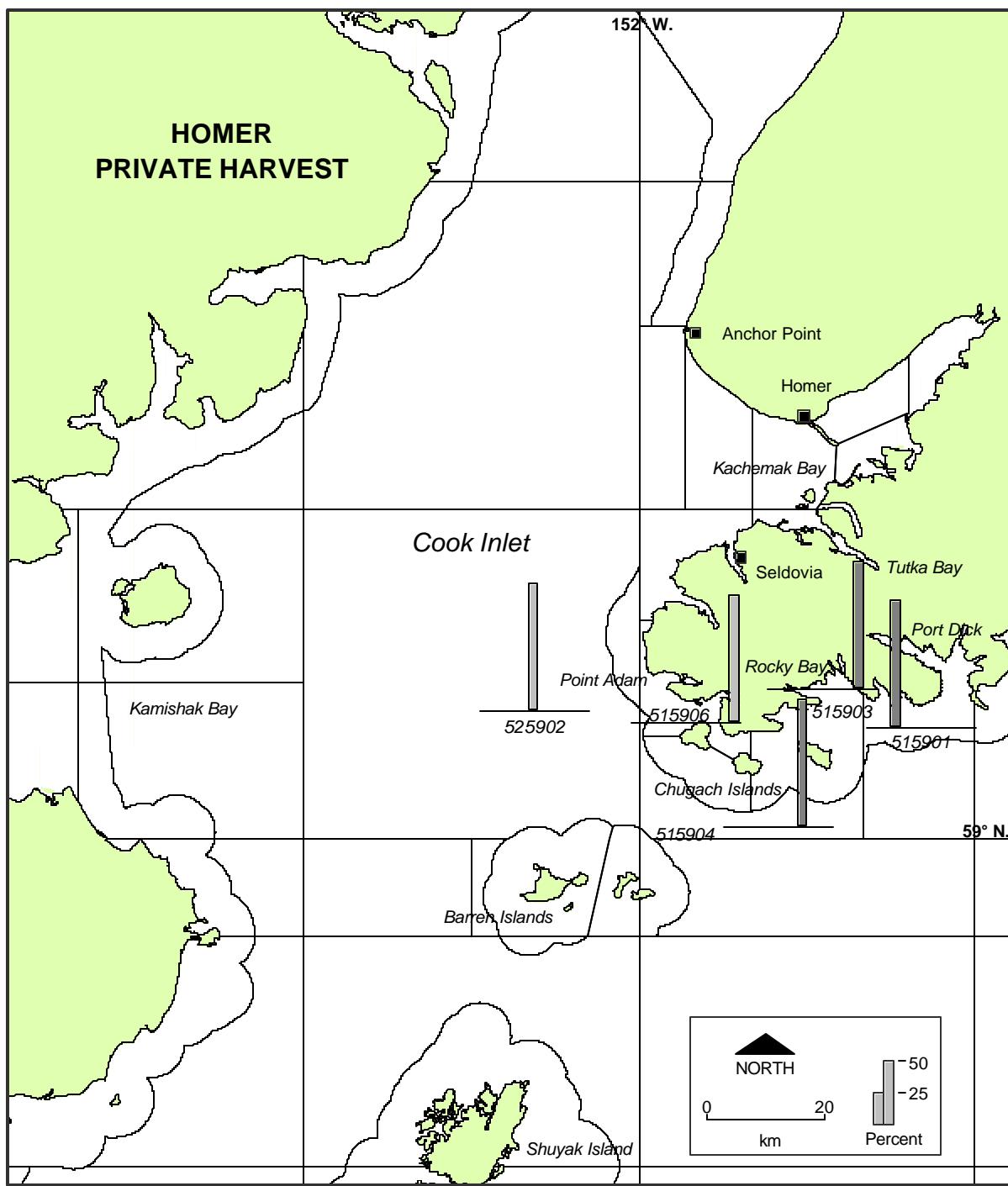
Note: Vertical bars represent the percentage of angler-days in each stat area each year during the period 1993-2002 (bars for odd-numbered years are darker).

Figure 11.-The distribution of sport fishing effort for lingcod (as defined in text) by private anglers interviewed at Homer.



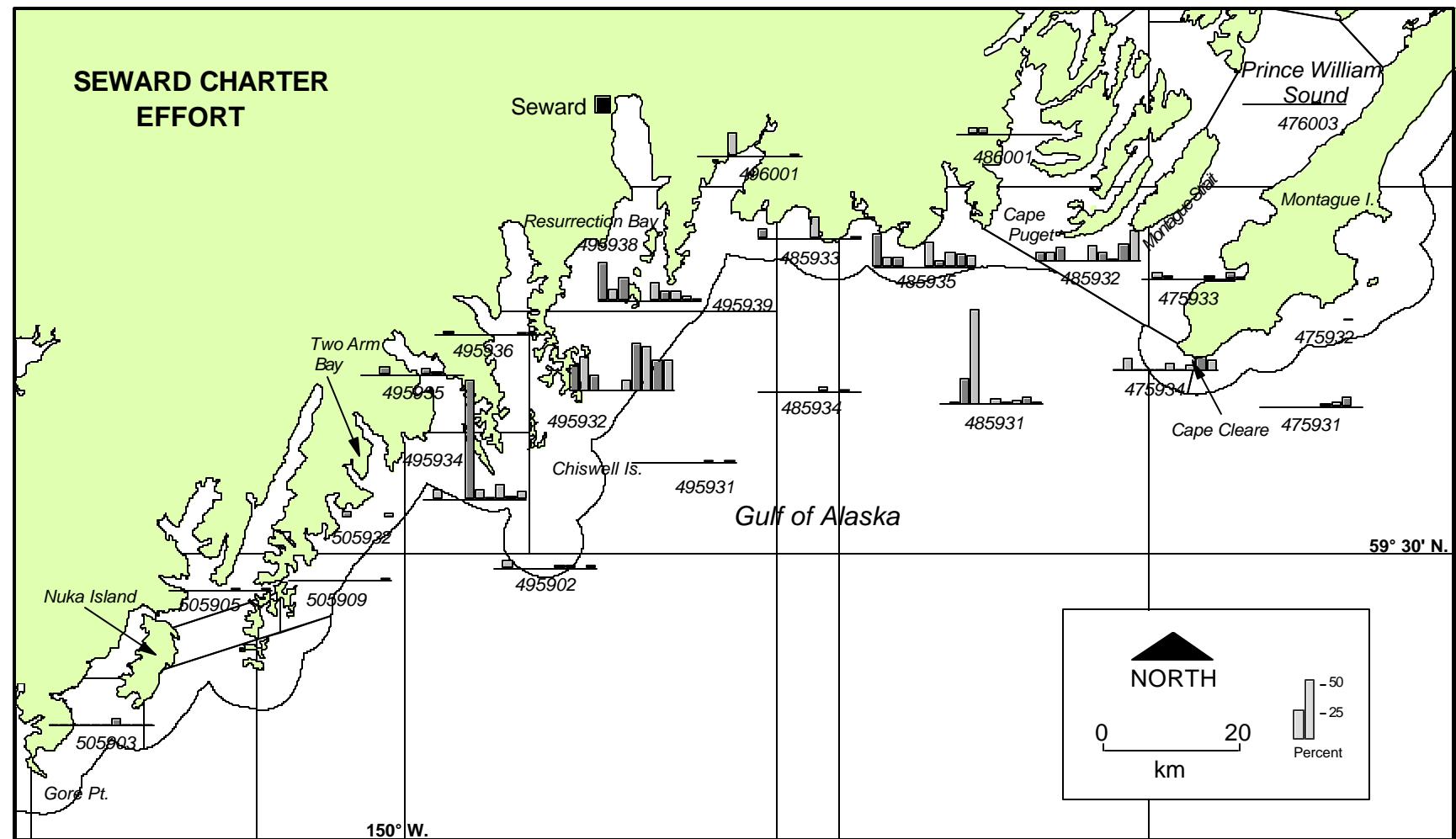
Note: Vertical bars represent the percentage of the harvest (in number) from each stat area each year during the period 1993-2002 (bars for odd-numbered years are darker).

Figure 12.-The distribution of sport lingcod harvest by charter anglers interviewed at Homer.



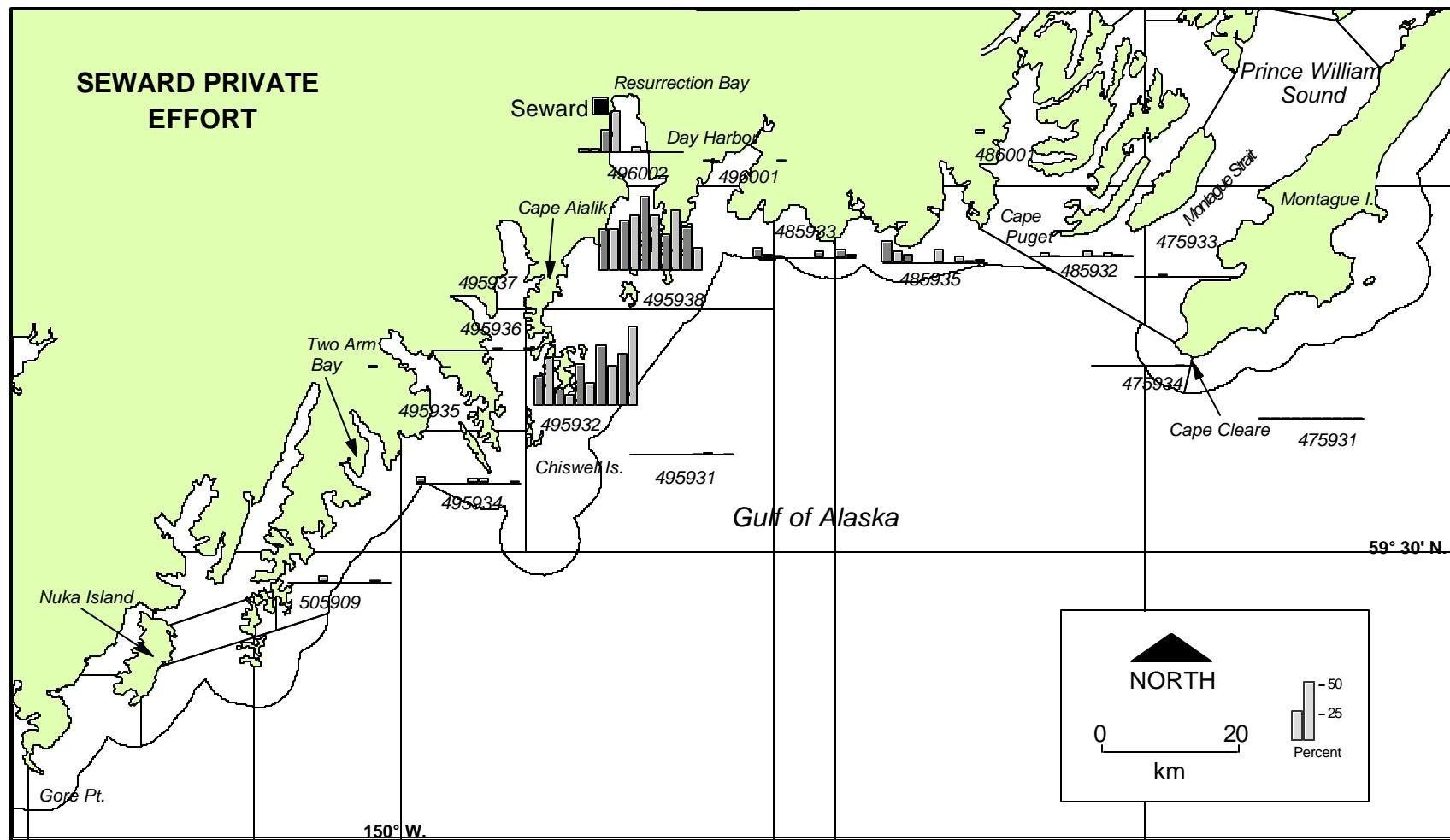
Note: Vertical bars represent the percentage of the harvest (in number) from each stat area each year during the period 1993-2002 (bars for odd-numbered years are darker).

Figure 13.-The distribution of sport lingcod harvest by private anglers interviewed at Homer.



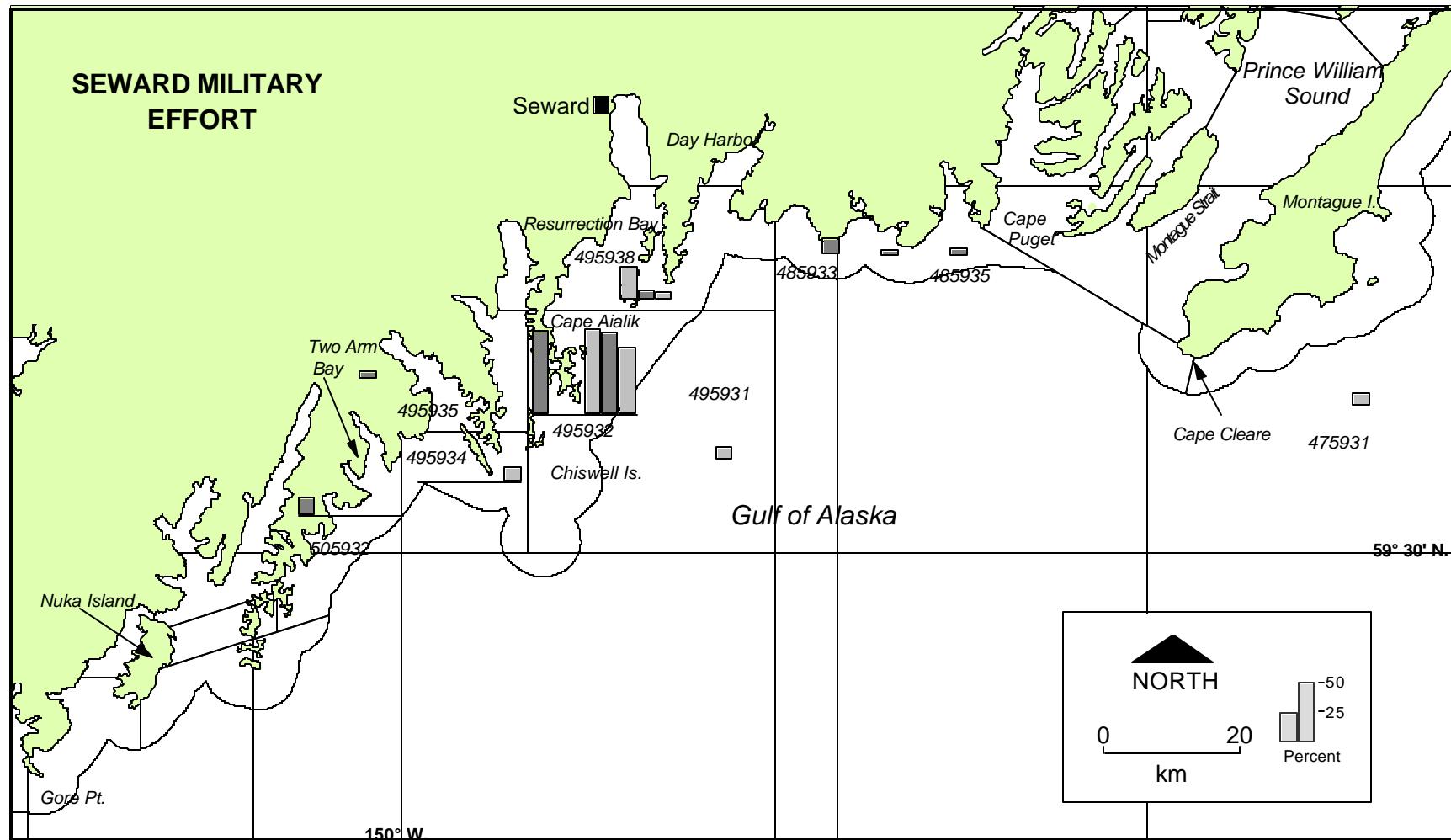
Note: Vertical bars represent the percentage of angler-days in each stat area each year during the period 1993-2002 (bars for odd-numbered years are darker).

Figure 14.-The distribution of sport fishing effort for lingcod (as defined in text) by charter anglers interviewed at Seward.



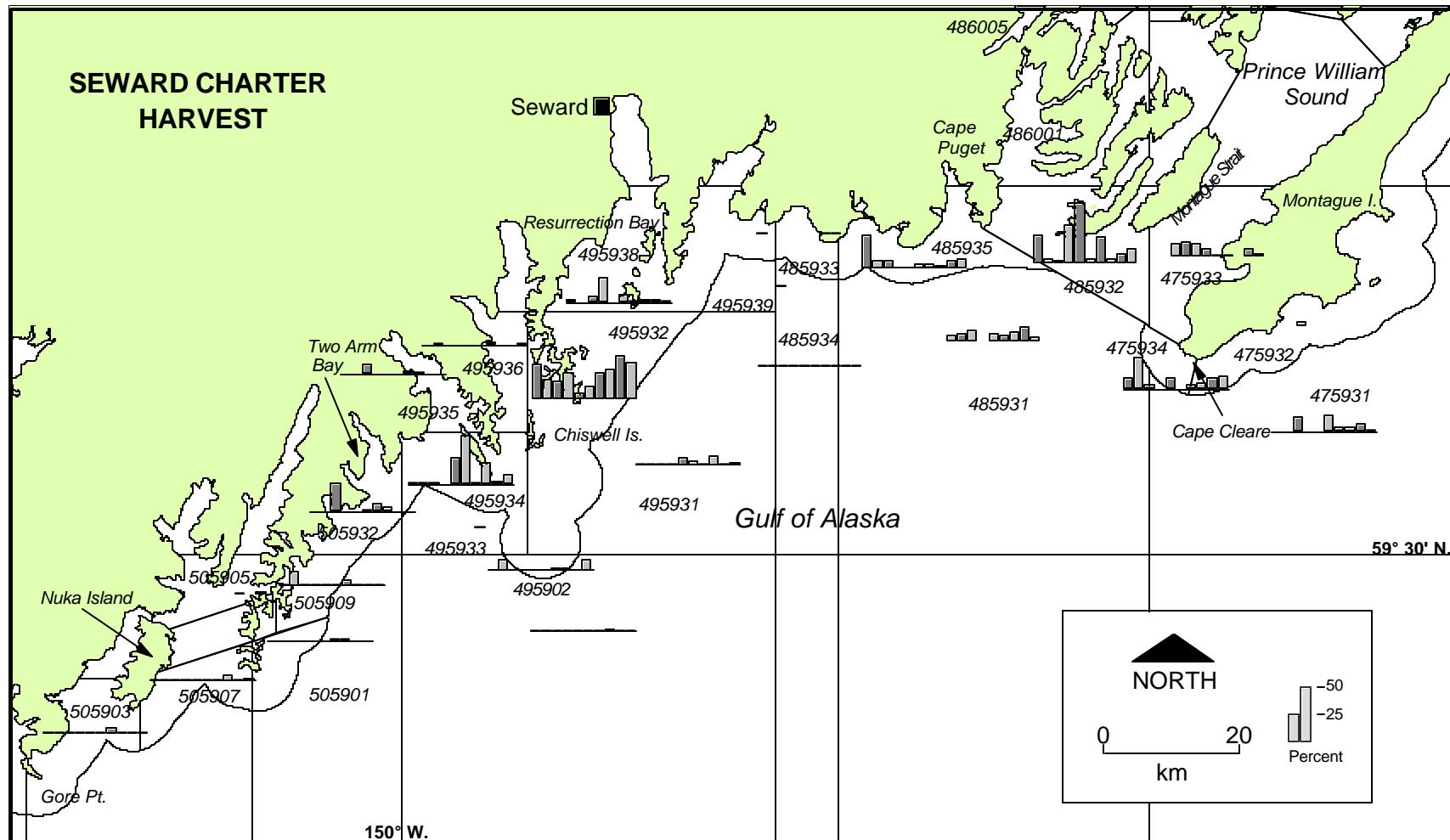
Note: Vertical bars represent the percentage of angler-days in each stat area each year during the period 1993-2002 (bars for odd-numbered years are darker).

Figure 15.-The distribution of sport fishing effort for lingcod (as defined in text) by private anglers interviewed at Seward.



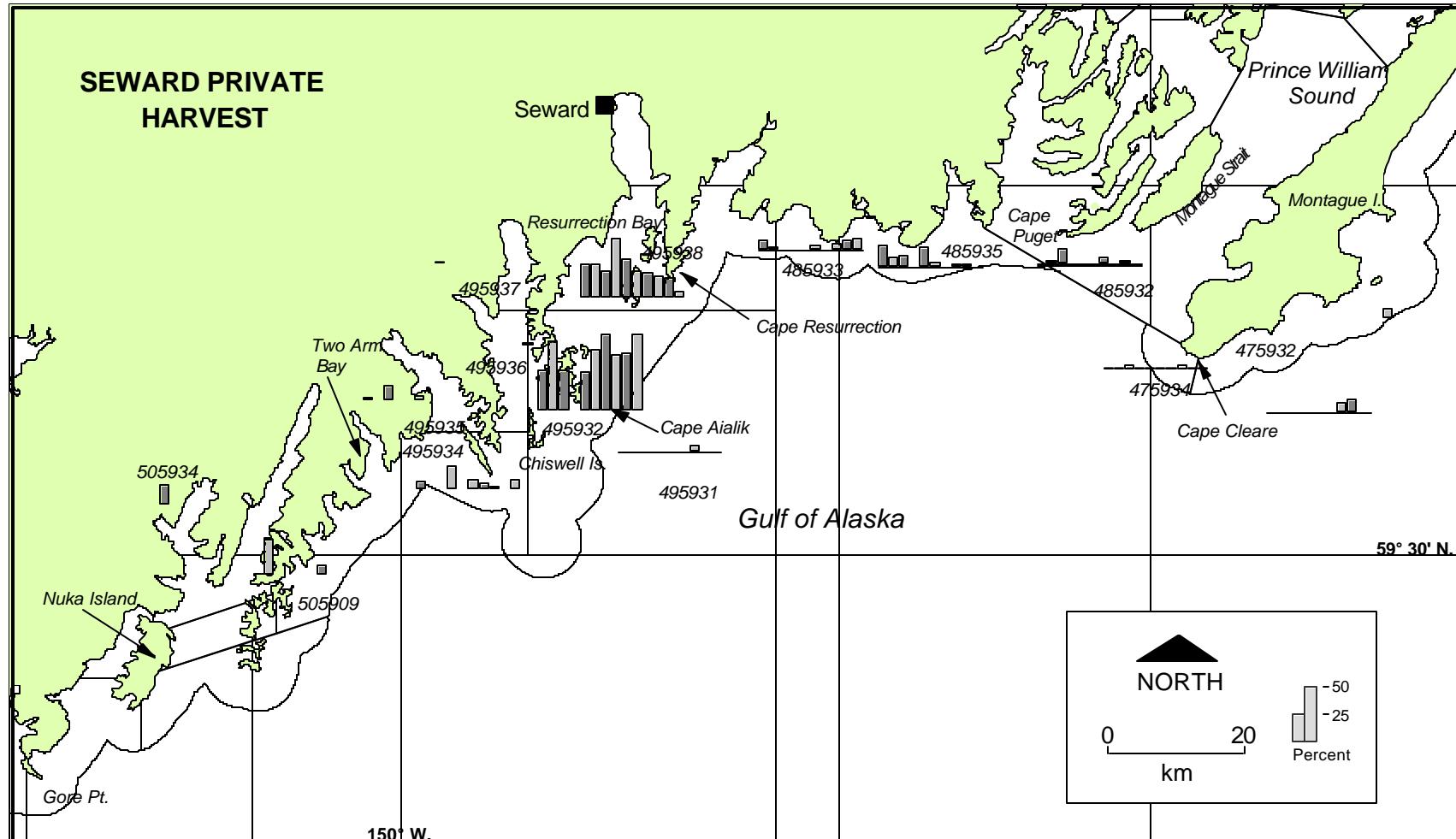
Note: Vertical bars represent the percentage of angler-days in each stat area each year during the period 1995-2000 (bars for odd-numbered years are darker).

Figure 16.-The distribution of sport fishing effort for lingcod (as defined in text) by military camp anglers interviewed at Seward.



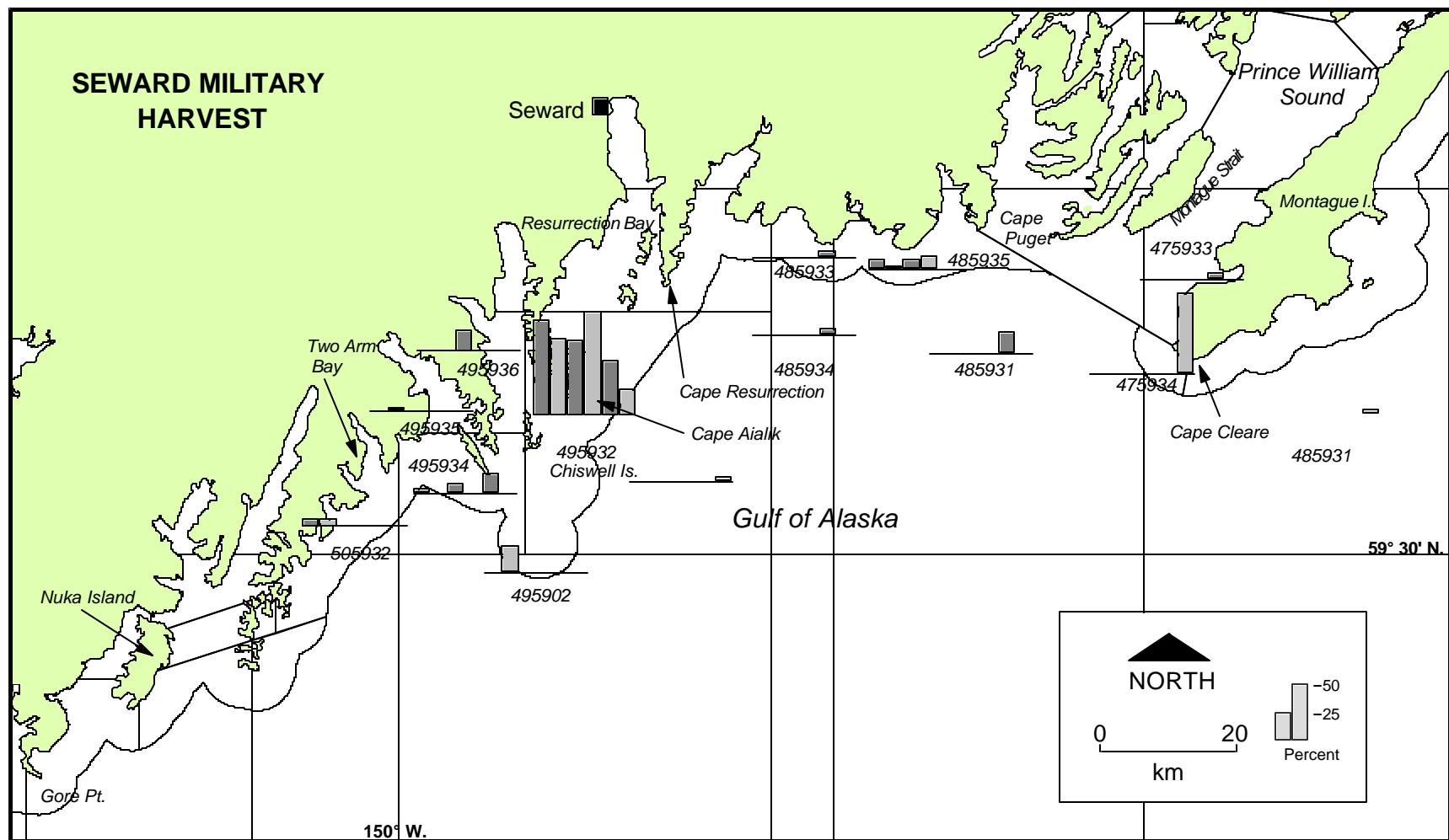
Note: Vertical bars represent the percentage of harvest (numbers of fish) in each stat area each year during the period 1993-2002 (bars for odd-numbered years are darker).

Figure 17.-The distribution of sport harvest of lingcod by charter anglers interviewed at Seward.



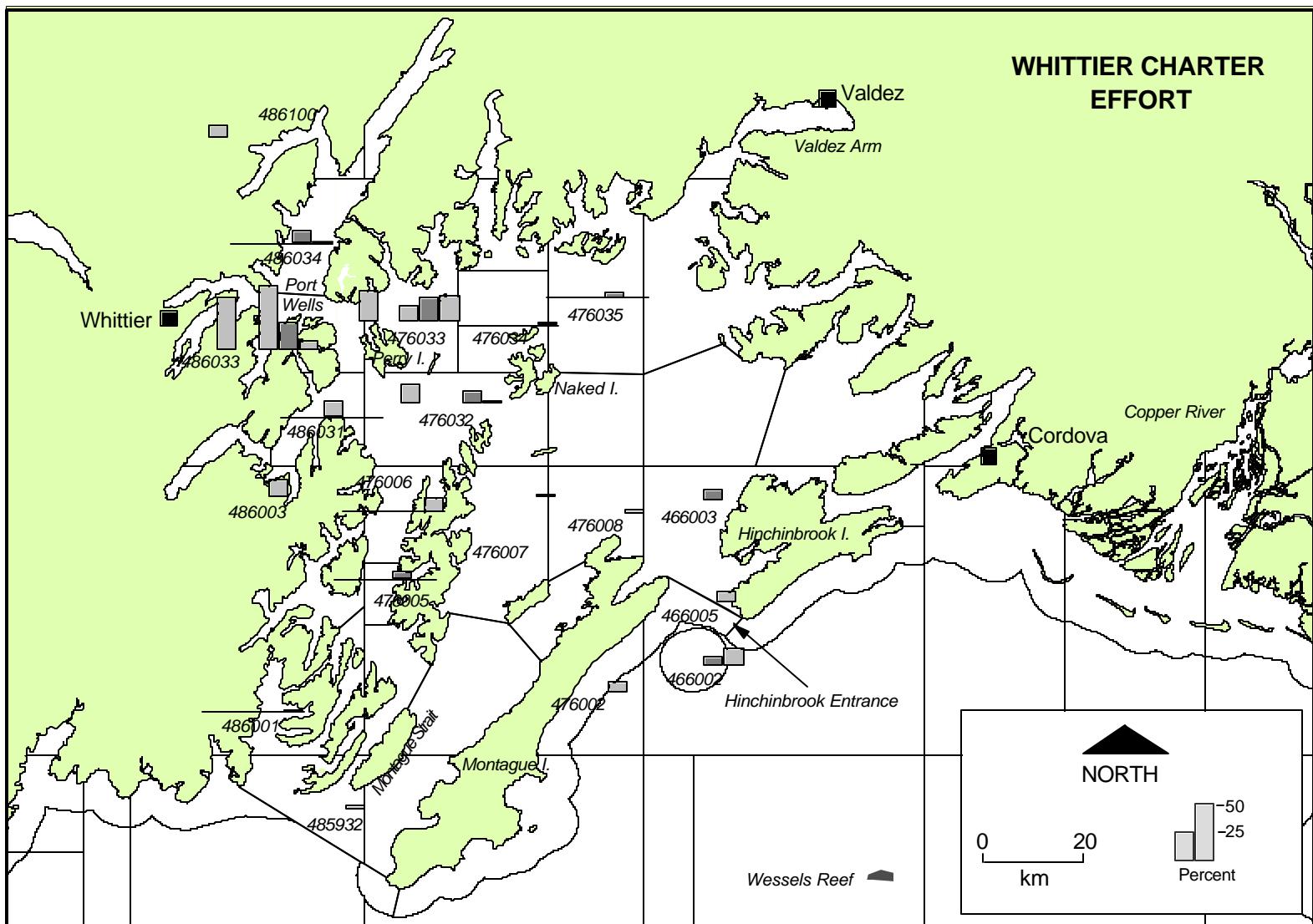
Note: Vertical bars represent the percentage of harvest (numbers of fish) in each stat area each year during the period 1993-2002 (bars for odd-numbered years are darker).

Figure 18. The distribution of sport harvest of lingcod by private anglers interviewed at Seward.



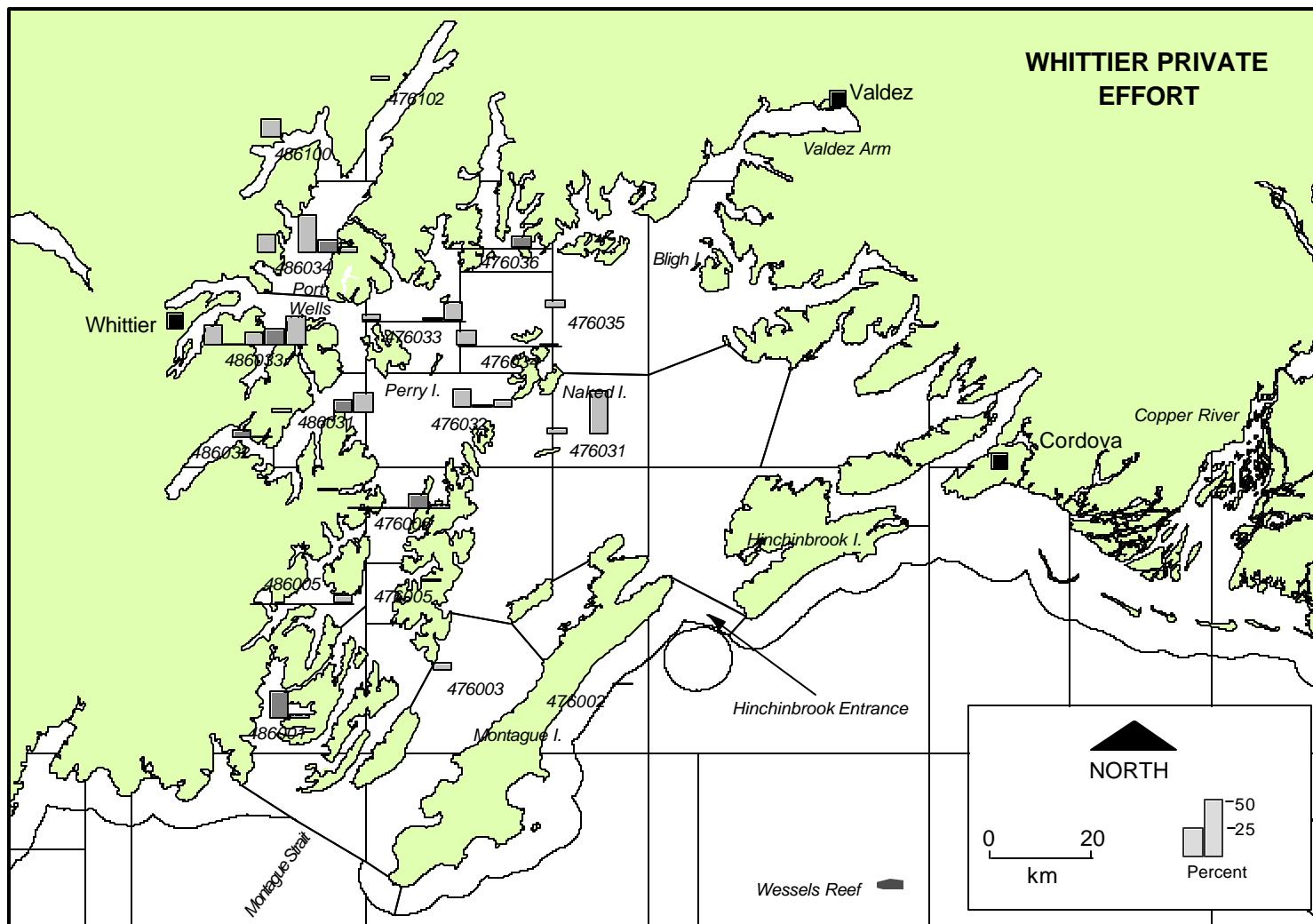
Note: Vertical bars represent the percentage of harvest (numbers of fish) in each stat area each year during the period 1995-2000 (bars for odd-numbered years are darker).

Figure 19.-The distribution of sport harvest of lingcod by military camp anglers interviewed at Seward.



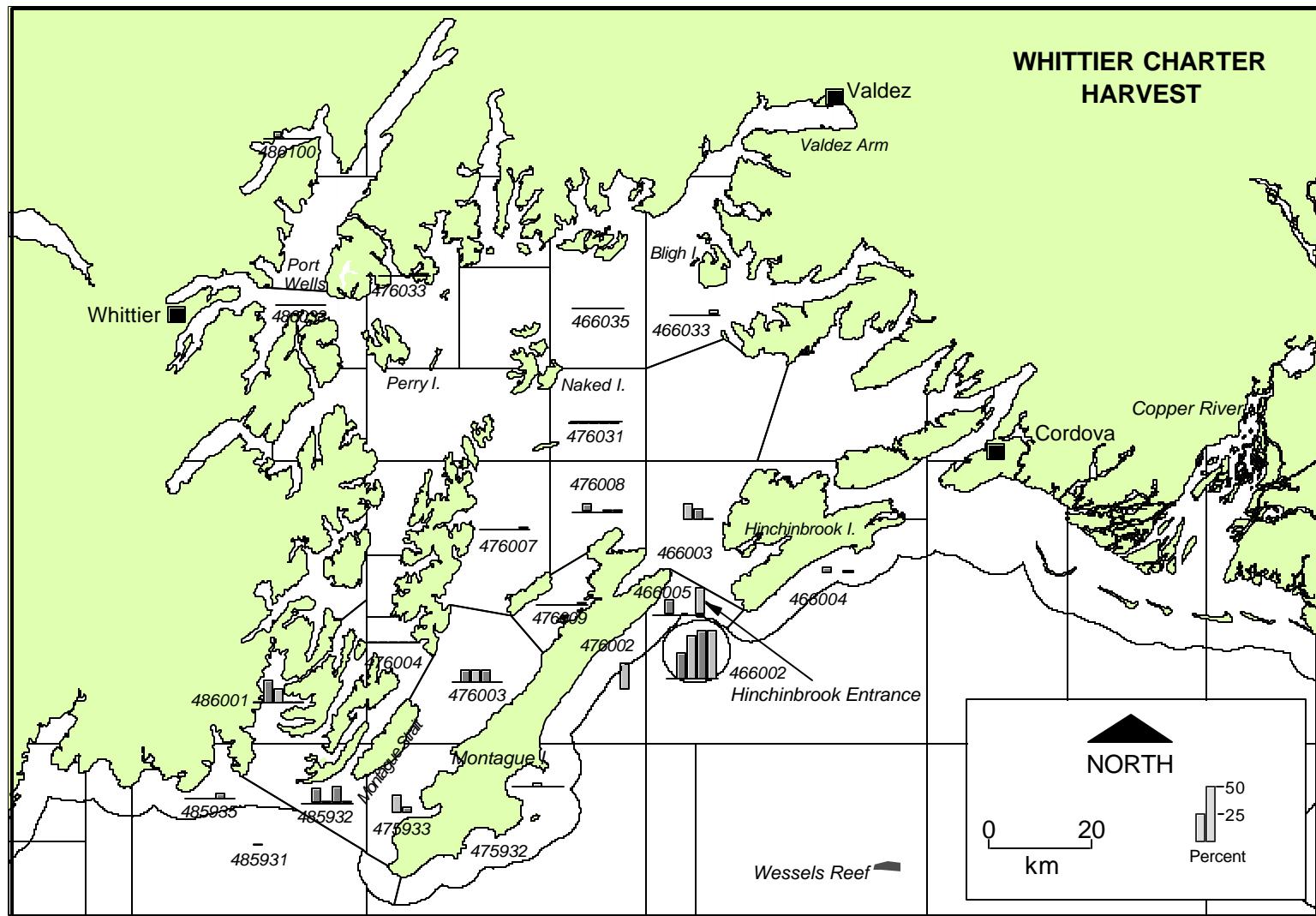
Note: Vertical bars represent the percentage of angler-days in each stat area each year during the period 1998-2002 (bars for odd-numbered years are darker).

Figure 20. The distribution of sport fishing effort for lingcod (as defined in text) by charter anglers interviewed at Whittier.



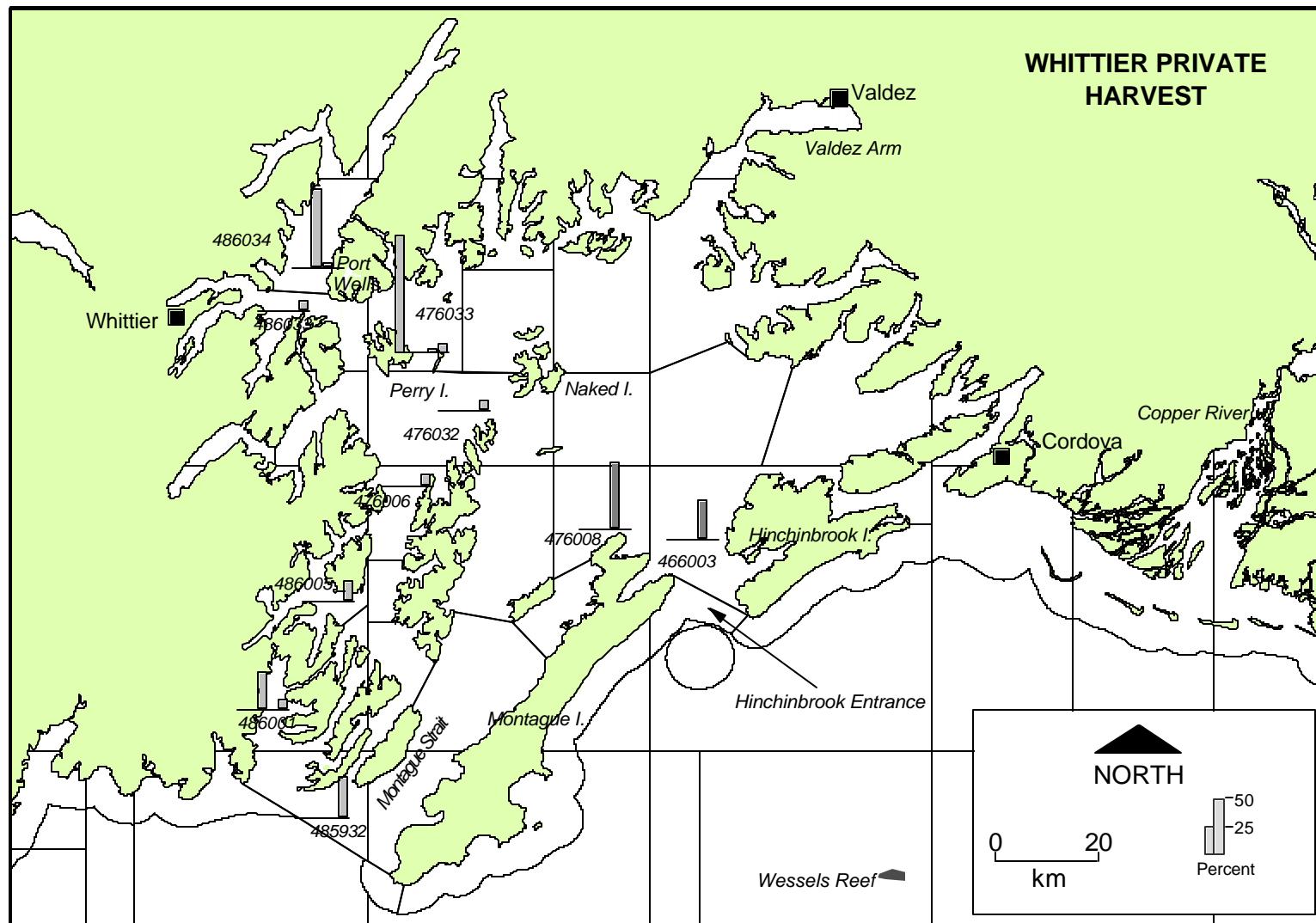
Note: Vertical bars represent the percentage of angler-days in each stat area each year during the period 1998-2002 (bars for odd-numbered years are darker).

Figure 21.-The distribution of sport fishing effort for lingcod (as defined in text) by private anglers interviewed at Whittier.



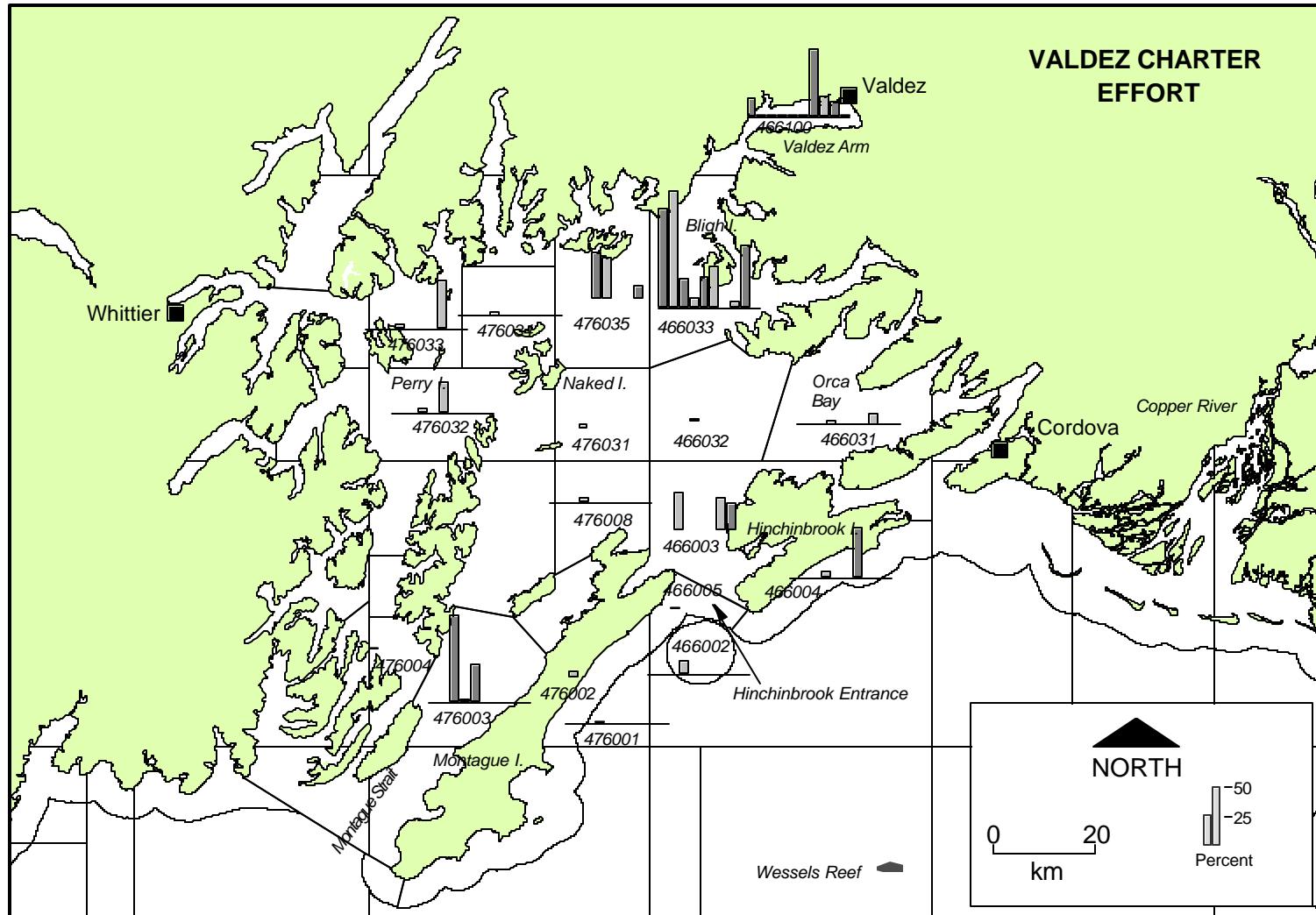
Note: Vertical bars represent the percentage of harvest (numbers of fish) in each stat area each year during the period 1998-2002 (bars for odd-numbered years are darker).

Figure 22.-The distribution of sport lingcod harvest by charter anglers interviewed at Whittier.



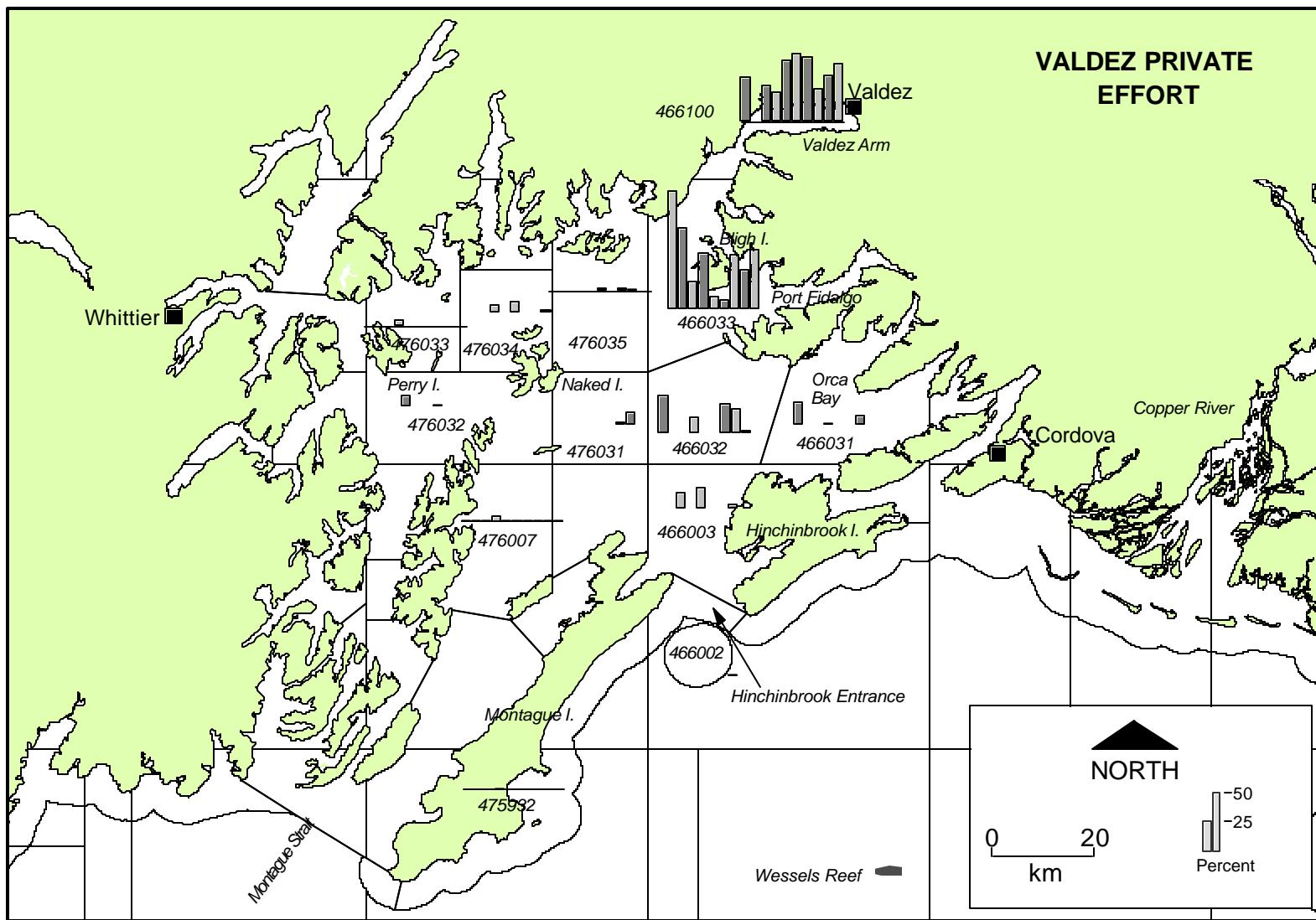
Note: Vertical bars represent the percentage of harvest (numbers of fish) in each stat area each year during the period 1998-2002 (bars for odd-numbered years are darker).

Figure 23.-The distribution of sport lingcod harvest by private anglers interviewed at Whittier.



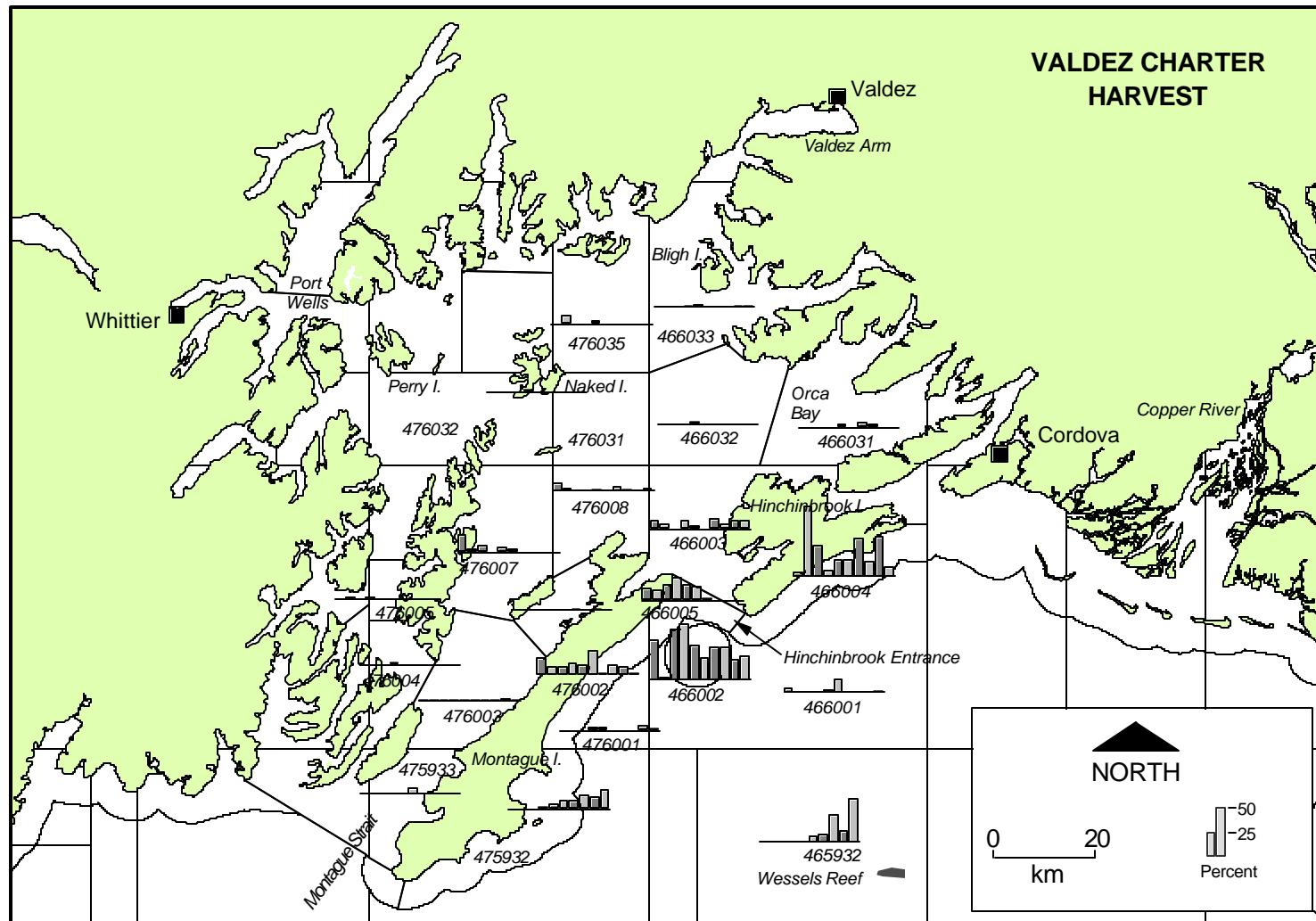
Note: Vertical bars represent the percentage of angler-days in each stat area each year during the period 1993-2002 (bars for odd-numbered years are darker).

Figure 24.-The distribution of sport fishing effort for lingcod (as defined in text) by charter anglers interviewed at Valdez.



Note: Vertical bars represent the percentage of angler-days in each stat area each year during the period 1993-2002 (bars for odd-numbered years are darker).

Figure 25.-The distribution of sport fishing effort for lingcod (as defined in text) by private anglers interviewed at Valdez.



Note: Vertical bars represent the percentage of harvest (numbers of fish) in each stat area each year during the period 1993-2002 (bars for odd-numbered years are darker).

Figure 26.-The distribution of sport lingcod harvest by charter anglers interviewed at Valdez.

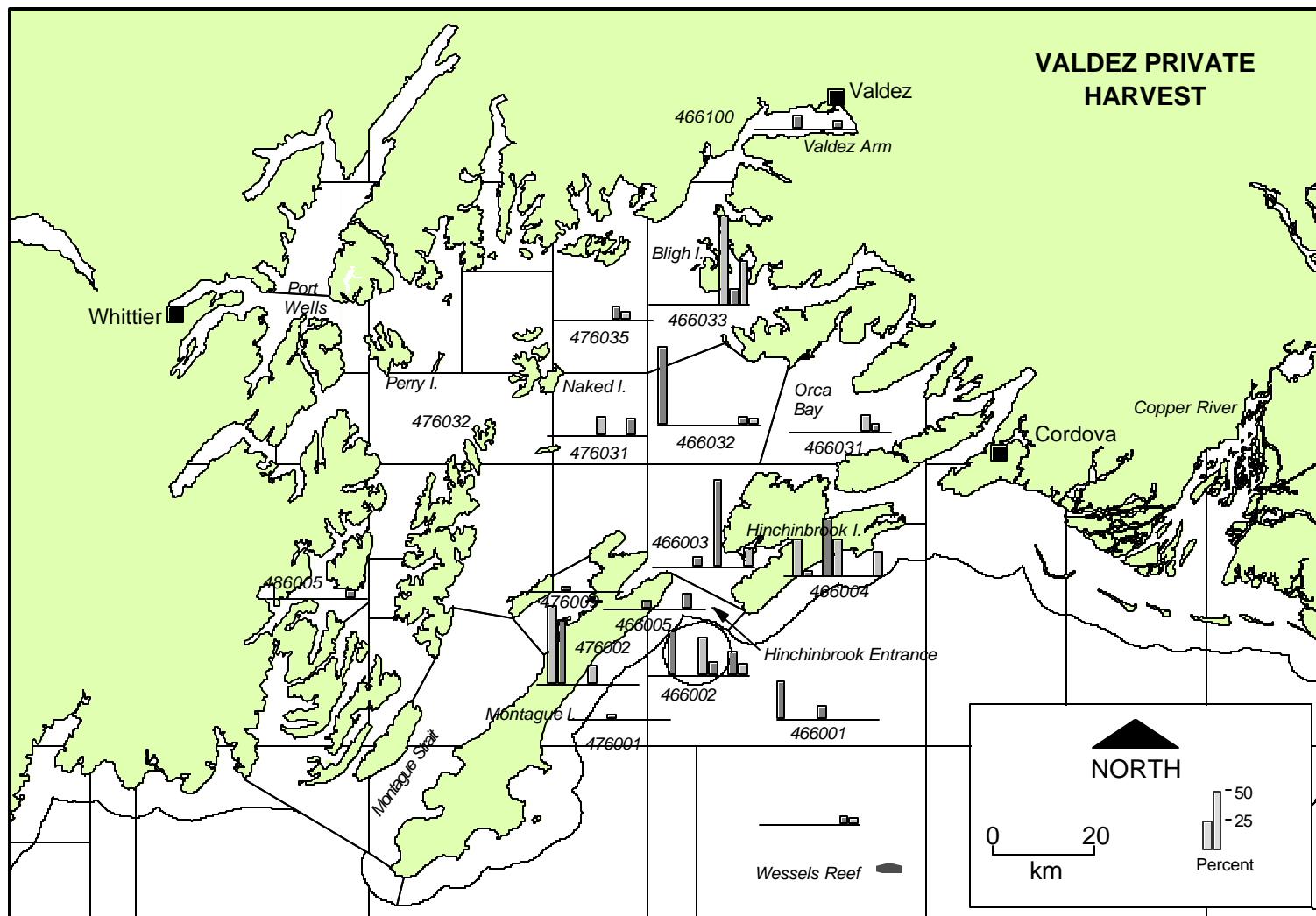


Figure 27.-The distribution of sport lingcod harvest by private anglers interviewed at Valdez.

APPENDIX A. LIST OF DATA AND PROGRAM FILES

Appendix A1.-Names and contents of lingcod data files, interview data files, and programs used for analysis of data archived with ADF&G, Division of Sport Fish, Anchorage.

File Name	Description	Format ^a
LING9302.SAS	Imports lingcod biological data from data files LING93.DTA, LING94.DTA, ..., LING02.DTA.	SAS 8.X
LingAgeComp.SAS	Estimates age composition by port, 1993-2002	SAS 8.X
AgeBubble.SAS	Makes age composition bubble plots	SAS 8.X
LingLengthComp.SAS	Estimates length composition by port, 1993-2002	SAS 8.X
LingSexComp.SAS	Estimates lingcod sex composition by port, 1993-2002	SAS 8.X
LingDist.SAS	Estimates lingcod effort and harvest by stat area, 1993-2002	SAS 8.X
LING9302.SD7	Comprehensive biological data set, 1993-2002	SAS 8.X
INT9302.SAS7BDAT	Comprehensive interview data set, 1993-2002	SAS 8.X
LING93.DTA	1993 biological data, consisting of the following	AWL
10030BE3.DTA	Homer biological data, 1993	AWL
Q7540BB3.DTA	Kodiak biological data, 1993	AWL
10020BB3.DTA	Seward biological data, 1993	AWL
J0010BB3.DTA	Valdez biological data, 1993	AWL
LING94.DTA	1994 biological data, consisting of the following	AWL
10030BC4.DTA	Homer biological data, 1994	AWL
Q7540BB4.DTA	Kodiak biological data, 1994	AWL
10020BD4.DTA	Seward biological data, 1994	AWL
J0010BE4.DTA	Valdez biological data, 1994	AWL
LING95.DTA	1995 biological data, consisting of the following	AWL
10030BB5.DTA	Homer biological data, 1995	AWL
Q7540BB5.DTA	Kodiak biological data, 1995	AWL
10020BB5.DTA	Seward biological data, 1995	AWL
J0010BB5.DTA	Valdez biological data, 1995	AWL
LING96.DTA	1996 biological data, consisting of the following	AWL
10030BB6.DTA	Homer biological data, 1996	AWL
Q7540BB6.DTA	Kodiak biological data, 1996	AWL
10020BB6.DTA	Seward biological data, 1996	AWL
J0010BB6.DTA	Valdez biological data, 1996	AWL
LING97.DTA	1997 biological data, consisting of the following	AWL
10030BBA.DTA	Homer biological data, 1997	AWL
Q7540BBA.DTA	Kodiak biological data, 1997	AWL
10020BBA.DTA	Seward biological data, 1997	AWL
J0010BBA.DTA	Valdez biological data, 1997	AWL
LING98.DTA	1998 biological data, consisting of the following	AWL
P1000300B021998.DTA	Homer biological data, 1998	AWL
Q-075400B021998.DTA	Kodiak biological data, 1998	AWL
P1000200B021998.DTA	Seward biological data, 1998	AWL
J-000100B021998.DTA	Valdez biological data, 1998	AWL

-continued-

Appendix A1.-Page 2 of 3.

<u>File Name</u>	<u>Description</u>	<u>Format^a</u>
LING99.DTA	1999 biological data, consisting of the following	AWL
J-072800B021999.DTA	Cordova biological data, 1999	AWL
P1000300B021999.DTA	Homer biological data, 1999	AWL
Q-075400B021999.DTA	Kodiak biological data, 1999	AWL
P1000200B021999.DTA	Seward biological data, 1999	AWL
J-000100B021999.DTA	Valdez biological data, 1999	AWL
J-000200B021999.DTA	Whittier biological data, 1999	AWL
 LING00.DTA	 2000 biological data, consisting of the following	 AWL
P1000300B022000.DTA	Homer biological data, 2000	AWL
Q-075400B022000.DTA	Kodiak biological data, 2000	AWL
P1000200B022000.DTA	Seward biological data, 2000	AWL
J-000100B022000.DTA	Valdez biological data, 2000	AWL
J-000200B022000.DTA	Whittier biological data, 2000	AWL
 LING01.DTA	 2001 biological data, consisting of the following	 AWL
P1000300B022001.DTA	Homer biological data, 2001	AWL
Q-075400B022001.DTA	Kodiak biological data, 2001	AWL
P1000200B022001.DTA	Seward biological data, 2001	AWL
J-000100B022001.DTA	Valdez biological data, 2001	AWL
J-000200B022001.DTA	Whittier biological data, 2001	AWL
 LING02.DTA	 2002 biological data, consisting of the following	 AWL
P1000300B022002.DTA	Homer biological data, 2002	AWL
Q-075400B022002.DTA	Kodiak biological data, 2002	AWL
P1000200B022002.DTA	Seward biological data, 2002	AWL
J-000100B022002.DTA	Valdez biological data, 2002	AWL
J-000200B022002.DTA	Whittier biological data, 2002	AWL
 HOMINT93.XLS	 Homer interview data, 1993	 MS Excel 97/00
KODINT93.XLS	Kodiak interview data, 1993	MS Excel 97/00
SEWINT93.XLS	Seward interview data, 1993	MS Excel 97/00
VALINT93.XLS	Valdez interview data, 1993	MS Excel 97/00
 HINT94.XLS	 Homer interview data, 1994	 MS Excel 97/00
KINT94.XLS	Kodiak interview data, 1994	MS Excel 97/00
SEWINT94.XLS	Seward interview data, 1994	MS Excel 97/00
VINT94.XLS	Valdez interview data, 1994	MS Excel 97/00
 10030MA5.DTA	 Homer interview data, 1995	 MI
Q7540MA5.DTA	Kodiak interview data, 1995	MI
10020MA5.DTA	Seward interview data, 1995	MI
J0010MA5.DTA	Valdez interview data, 1995	MI
 10030MA6.DTA	 Homer interview data, 1996	 MI
Q7540MA6.DTA	Kodiak interview data, 1996	MI
10020MA6.DTA	Seward interview data, 1996	MI
J0010MA6.DTA	Valdez interview data, 1996	MI

-continued-

Appendix A1.-Page 3 of 3.

File Name	Description	Format ^a
10030MAA.DTA	Homer interview data, 1997	MI
Q7540MAA.DTA	Kodiak interview data, 1997	MI
10020MAA.DTA	Seward interview data, 1997	MI
J0010MAA.DTA	Valdez interview data, 1997	MI
P1000300M011998.DTA	Homer interview data, 1998	MI
Q-075400M011998.DTA	Kodiak interview data, 1998	MI
P1000200M011998.DTA	Seward interview data, 1998	MI
J-000100M011998.DTA	Valdez interview data, 1998	MI
J-000200M011998.DTA	Whittier interview data, 1998	MI
P1000300M011999.DTA	Homer interview data, 1999	MI
Q-075400M011999.DTA	Kodiak interview data, 1999	MI
P1000200M011999.DTA	Seward interview data, 1999	MI
J-000100M011999.DTA	Valdez interview data, 1999	MI
J-000200M011999.DTA	Whittier interview data, 1999	MI
J-072800M011999.DTA	Cordova interview data, 1999	MI
P1000300P012000.DTA	Homer interview data, 2000	PI
Q-075400P012000.DTA	Kodiak interview data, 2000	PI
P1000200P012000.DTA	Seward interview data, 2000	PI
J-000100P012000.DTA	Valdez interview data, 2000	PI
J-000200P012000.DTA	Whittier interview data, 2000	PI
P1000300P012001.DTA	Homer interview data, 2001	PI
Q-075400P012001.DTA	Kodiak interview data, 2001	PI
P1000200P012001.DTA	Seward interview data, 2001	PI
J-000100P012001.DTA	Valdez interview data, 2001	PI
J-000200P012001.DTA	Whittier interview data, 2001	PI
P1000300P012002.DTA	Homer interview data, 2002	PI
Q-075400P012002.DTA	Kodiak interview data, 2002	PI
P1000200P012002.DTA	Seward interview data, 2002	PI
J-000100P012002.DTA	Valdez interview data, 2002	PI
J-000200P012002.DTA	Whittier interview data, 2002	PI
INTSPEC95.DOC	Field specification form for 1995 interview files	MS Word 97/00
INTSPEC96.DOC	Field specification form for 1996 interview files	MS Word 97/00
INTSPEC97.DOC	Field specification form for 1997 interview files	MS Word 97/00
INTSPEC98.DOC	Field specification form for 1998 interview files	MS Word 97/00
INTSPEC99.DOC	Field specification form for 1999 interview files	MS Word 97/00
INTSPEC00.DOC	Field specification form for 2000 interview files	MS Word 97/00
INTSPEC01.DOC	Field specification form for 2001 interview files	MS Word 97/00
INTSPEC02.DOC	Field specification form for 2002 interview files	MS Word 97/00

^a ADF&G Mark Sense file formats are as follows:

AWL - Biological (age-weight-length) Versions 1.1 and 1.2

MI - Marine Interview Version 1.0

PI - Port Sampling Interview Version 1.0

APPENDIX B. DETAILED DATA TABLES

Appendix B1.-Estimated age composition of the lingcod sport harvest landed at Kodiak, Homer, Seward, Whittier and Valdez, 1993-2002.

KODIAK:

Age	1993			1994			1995			1996			1997			1998			1999			2000			2001					
	n	p	SE(p)																											
3	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	1	0.012	0.012	1	0.071	0.071	0	0.000	-			
4	7	0.104	0.038	3	0.028	0.016	0	0.000	-	0	0.000	-	1	0.032	0.032	-	0.000	-	1	0.017	0.017	4	0.049	0.024	0	0.000	-	5	0.125	0.053
5	10	0.149	0.044	7	0.065	0.024	0	0.000	-	2	0.026	0.018	1	0.032	0.032	4	0.051	0.025	3	0.051	0.029	3	0.037	0.021	0	0.000	-	9	0.225	0.067
6	3	0.045	0.025	9	0.083	0.027	6	0.048	0.019	0	0.000	-	0	0.000	-	7	0.089	0.032	2	0.034	0.024	8	0.098	0.033	0	0.000	-	4	0.100	0.048
7	5	0.075	0.032	5	0.046	0.020	7	0.056	0.021	2	0.026	0.018	1	0.032	0.032	1	0.013	0.013	3	0.051	0.029	2	0.024	0.017	1	0.071	0.071	3	0.075	0.042
8	18	0.269	0.055	12	0.111	0.030	8	0.064	0.022	11	0.143	0.040	1	0.032	0.032	0	0.000	-	3	0.051	0.029	5	0.061	0.027	1	0.071	0.071	1	0.025	0.025
9	4	0.060	0.029	27	0.250	0.042	3	0.024	0.014	4	0.052	0.025	3	0.097	0.054	9	0.114	0.036	2	0.034	0.024	1	0.012	0.012	0	0.000	-	0	0.000	-
10	8	0.119	0.040	13	0.120	0.031	17	0.136	0.031	2	0.026	0.018	1	0.032	0.032	11	0.139	0.039	10	0.169	0.049	6	0.073	0.029	0	0.000	-	1	0.025	0.025
11	1	0.015	0.015	4	0.037	0.018	32	0.256	0.039	11	0.143	0.040	2	0.065	0.045	1	0.013	0.013	6	0.102	0.040	13	0.159	0.041	0	0.000	-	0	0.000	-
12	2	0.030	0.021	5	0.046	0.020	8	0.064	0.022	20	0.260	0.050	3	0.097	0.054	3	0.038	0.022	6	0.102	0.040	7	0.085	0.031	3	0.214	0.114	3	0.075	0.042
13	3	0.045	0.025	2	0.019	0.013	11	0.088	0.025	12	0.156	0.042	4	0.129	0.061	11	0.139	0.039	4	0.068	0.033	1	0.012	0.012	0	0.000	-	2	0.050	0.035
14	4	0.060	0.029	6	0.056	0.022	5	0.040	0.018	3	0.039	0.022	5	0.161	0.067	16	0.203	0.046	7	0.119	0.042	6	0.073	0.029	0	0.000	-	1	0.025	0.025
15	2	0.030	0.021	9	0.083	0.027	6	0.048	0.019	1	0.013	0.013	1	0.032	0.032	5	0.063	0.028	6	0.102	0.040	8	0.098	0.033	2	0.000	0.097	1	0.025	0.025
16	0	0.000	-	6	0.056	0.022	10	0.080	0.024	1	0.013	0.013	2	0.065	0.045	1	0.013	0.013	2	0.034	0.024	9	0.110	0.035	0	0.000	-	6	0.150	0.057
17	0	0.000	-	0	0.000	-	9	0.072	0.023	4	0.052	0.025	2	0.065	0.045	1	0.013	0.013	1	0.017	0.017	1	0.012	0.012	6	0.429	0.137	1	0.025	0.025
18	0	0.000	-	0	0.000	-	3	0.024	0.014	4	0.052	0.025	3	0.097	0.054	2	0.025	0.018	0	0.000	-	1	0.012	0.012	0	0.000	-	1	0.025	0.025
19	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	1	0.032	0.032	4	0.051	0.025	1	0.017	0.017	3	0.037	0.021	0	0.000	-	1	0.025	0.025
20	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	3	0.038	0.022	2	0.034	0.024	1	0.012	0.012	0	0.000	-	0	0.000	-
21	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	2	0.024	0.017	0	0.000	-	0	0.000	-			
22	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-			
23	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-			
Total	67			108			125			77			31			79			59			82			14			40		

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HOMER:

Age	1993			1994			1995			1996			1997			1998			1999			2000			2001					
	n	p	SE(p)																											
5	1	0.053	0.053	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-			
6	2	0.105	0.072	2	0.069	0.048	0	0.000	-	0	0.000	-	0	0.000	-	1	0.024	0.024	0	0.000	-	1	0.007	0.007	0	0.000	-	3	0.024	0.014
7	1	0.053	0.053	2	0.069	0.048	1	0.063	0.063	4	0.095	0.046	1	0.045	0.045	2	0.048	0.033	3	0.032	0.018	7	0.051	0.019	2	0.019	0.013	7	0.055	0.020
8	2	0.105	0.072	2	0.069	0.048	1	0.063	0.063	3	0.071	0.040	3	0.136	0.075	7	0.167	0.058	4	0.043	0.021	6	0.044	0.018	2	0.019	0.013	7	0.055	0.020
9	0	0.000	-	2	0.069	0.048	0	0.000	-	3	0.071	0.040	3	0.136	0.075	2	0.048	0.033	4	0.043	0.021	5	0.036	0.016	2	0.019	0.013	8	0.063	0.022
10	0	0.000	-	6	0.207	0.077	2	0.125	0.085	3	0.071	0.040	2	0.091	0.063	4	0.095	0.046	16	0.170	0.039	8	0.058	0.020	2	0.019	0.013	5	0.039	0.017
11	2	0.105	0.072	4	0.138	0.065	4	0.250	0.112	2	0.048	0.033	2	0.091	0.063	2	0.048	0.033	21	0.223	0.043	25	0.182	0.033	3	0.028	0.016	7	0.055	0.020
12	2	0.105	0.072	3	0.103	0.058	2	0.125	0.085	5	0.119	0.051	2	0.091	0.063	2	0.048	0.033	4	0.043	0.021	15	0.109	0.027	18	0.168	0.036	7	0.055	0.020
13	3	0.158	0.086	3	0.103	0.058	2	0.125	0.085	7	0.167	0.058	2	0.091	0.063	8	0.190	0.061	5	0.053	0.023	5	0.036	0.016	21	0.196	0.039	23	0.181	0.034
14	3	0.158	0.086	3	0.103	0.058	0	0.000	-	5	0.119	0.051	1	0.045	0.045	2	0.048	0.033	10	0.106	0.032	8	0.058	0.020	6	0.056	0.022	9	0.071	0.023
15	0	0.000	-	2	0.069	0.048	0	0.000	-	3	0.071	0.040	2	0.091	0.063	1	0.024	0.024	5	0.053	0.023	16	0.117	0.028	8	0.075	0.026	4	0.031	0.016
16	0	0.000	-	0	0.000	-	1	0.063	0.063	1	0.024	0.024	1	0.045	0.045	4	0.095	0.046	3	0.032	0.018	15	0.109	0.027	9	0.084	0.027	10	0.079	0.024
17	0	0.000	-	0	0.000	-	1	0.063	0.063	1	0.024	0.024	1	0.045	0.045	2	0.048	0.033	3	0.032	0.018	8	0.058	0.020	16	0.150	0.035	11	0.087	0.025
18	0	0.000	-	0	0.000	-	0	0.000	-	4	0.095	0.046	1	0.045	0.045	1	0.024	0.024	5	0.053	0.023	10	0.073	0.022	6	0.056	0.022	9	0.071	0.023
19	2	0.105	0.072	0	0.000	-	0	0.000	-	1	0.024	0.024	1	0.045	0.045	1	0.024	0.024	3	0.032	0.018	2	0.015	0.010	6	0.056	0.022	7	0.055	0.020
20	1	0.053	0.053	0	0.000	-	1	0.063	0.063	0	0.000	-	0	0.000	-	2	0.048	0.033	6	0.064	0.025	2	0.015	0.010	4	0.037	0.018	5	0.039	0.017
21	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	1	0.024	0.024	2	0.021	0.015	3	0.022	0.013	1	0.009	0.009	4	0.031	0.016
22	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	1	0.007	0.007	0	0.000	-	0	0.000	-
23	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.009	0.009	0	0.000	-	0	0.000	-
24	0	0.000	-	0	0.000	-	1	0.063	0.063	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	1	0.008	0.008
Total	19			29			16			42			22			42			94			137			107			127		

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SEWARD:

Age	1993			1994			1995			1996			1997			1998			1999			2000			2001					
	n	p	SE(p)																											
3	0	0.000	-	0	0.000	-	1	0.003	0.003	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	3	0.020	0.011	0	0.000	-			
4	0	0.000	-	0	0.000	-	1	0.003	0.003	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	1	0.004	0.004	0	0.000	-			
5	5	0.016	0.007	0	0.000	-	1	0.003	0.003	0	0.000	-	3	0.033	0.019	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-			
6	11	0.035	0.010	3	0.007	0.004	1	0.003	0.003	0	0.000	-	4	0.044	0.022	2	0.013	0.009	3	0.012	0.007	1	0.004	0.004	1	0.007	0.007			
7	27	0.085	0.016	5	0.012	0.005	7	0.023	0.008	4	0.038	0.019	9	0.099	0.031	10	0.065	0.020	3	0.012	0.007	0	0.000	-	6	0.039	0.016			
8	38	0.120	0.018	47	0.109	0.015	8	0.026	0.009	12	0.113	0.031	10	0.110	0.033	17	0.111	0.025	5	0.020	0.009	7	0.028	0.010	12	0.079	0.022			
9	35	0.110	0.018	57	0.132	0.016	13	0.042	0.011	7	0.066	0.024	9	0.099	0.031	25	0.163	0.030	19	0.076	0.017	9	0.036	0.012	9	0.059	0.019			
10	64	0.202	0.023	55	0.127	0.016	36	0.116	0.018	13	0.123	0.032	8	0.088	0.030	14	0.092	0.023	31	0.124	0.021	19	0.076	0.017	9	0.059	0.019			
11	47	0.148	0.020	76	0.176	0.018	42	0.135	0.019	15	0.142	0.034	9	0.099	0.031	8	0.052	0.018	37	0.147	0.022	35	0.140	0.022	19	0.125	0.027			
12	31	0.098	0.017	88	0.204	0.019	46	0.148	0.020	15	0.142	0.034	11	0.121	0.034	24	0.157	0.029	18	0.072	0.016	26	0.104	0.019	22	0.145	0.029			
13	22	0.069	0.014	37	0.086	0.013	61	0.197	0.023	12	0.113	0.031	12	0.132	0.036	11	0.072	0.021	21	0.084	0.018	20	0.080	0.017	15	0.099	0.024			
14	26	0.082	0.015	23	0.053	0.011	43	0.139	0.020	15	0.142	0.034	8	0.088	0.030	15	0.098	0.024	33	0.131	0.021	32	0.128	0.021	9	0.059	0.019			
15	6	0.019	0.008	17	0.039	0.009	20	0.065	0.014	5	0.047	0.021	6	0.066	0.026	10	0.065	0.020	31	0.124	0.021	28	0.112	0.020	21	0.138	0.028			
16	2	0.006	0.004	14	0.032	0.009	18	0.058	0.013	4	0.038	0.019	1	0.011	0.011	6	0.039	0.016	14	0.056	0.015	21	0.084	0.018	13	0.086	0.023			
17	0	0.000	-	5	0.012	0.005	7	0.023	0.008	3	0.028	0.016	1	0.011	0.011	5	0.033	0.014	24	0.096	0.019	19	0.076	0.017	4	0.026	0.013			
18	0	0.000	-	4	0.009	0.005	4	0.013	0.006	1	0.009	0.009	0	0.000	-	4	0.026	0.013	8	0.032	0.011	14	0.056	0.015	4	0.026	0.013			
19	2	0.006	0.004	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	2	0.013	0.009	4	0.016	0.008	8	0.032	0.011	3	0.020	0.011			
20	0	0.000	-	1	0.002	0.002	1	0.003	0.003	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	5	0.020	0.009	1	0.007	0.007			
21	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	4	0.016	0.008	1	0.007	0.007			
22	1	0.003	0.003	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	1	0.004	0.004	0	0.000	-			
Total	317			432			310			106			91			153			251			250			152			89		

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VALDEZ:

Age	1993			1994			1995			1996			1997			1998			1999			2000			2001				
	n	p	SE(p)																										
3	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	1	0.006	0.006	0	0.000	-	1	0.004	0.004	0	0.000	-	0	0.000	-		
4	1	0.040	0.040	0	0.000	-	0	0.000	-	0	0.000	-	1	0.006	0.006	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-		
5	0	0.000	-	0	0.000	-	0	0.000	-	1	0.016	0.016	4	0.025	0.012	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-		
6	3	0.120	0.066	1	0.030	0.030	0	0.000	-	2	0.032	0.023	1	0.006	0.006	0	0.000	-	0	0.000	-	1	0.007	0.007	0	0.000	-		
7	2	0.080	0.055	3	0.091	0.051	3	0.052	0.029	4	0.065	0.031	8	0.050	0.017	4	0.022	0.011	0	0.000	-	2	0.015	0.010	3	0.013	0.007		
8	4	0.160	0.075	2	0.061	0.042	1	0.017	0.017	9	0.145	0.045	14	0.088	0.023	5	0.028	0.012	5	0.019	0.009	0	0.000	-	11	0.046	0.014		
9	2	0.080	0.055	4	0.121	0.058	6	0.103	0.040	9	0.145	0.045	9	0.057	0.018	12	0.066	0.019	23	0.088	0.018	2	0.015	0.010	9	0.038	0.012		
10	4	0.160	0.075	5	0.152	0.063	7	0.121	0.043	11	0.177	0.049	12	0.075	0.021	19	0.105	0.023	29	0.111	0.019	3	0.022	0.013	13	0.055	0.015		
11	3	0.120	0.066	6	0.182	0.068	8	0.138	0.046	7	0.113	0.041	27	0.170	0.030	9	0.050	0.016	36	0.138	0.021	11	0.080	0.023	24	0.101	0.020		
12	3	0.120	0.066	4	0.121	0.058	8	0.138	0.046	6	0.097	0.038	21	0.132	0.027	17	0.094	0.022	29	0.111	0.019	10	0.073	0.022	23	0.097	0.019		
13	1	0.040	0.040	4	0.121	0.058	8	0.138	0.046	6	0.097	0.038	24	0.151	0.028	20	0.110	0.023	29	0.111	0.019	11	0.080	0.023	25	0.105	0.020		
14	2	0.080	0.055	0	0.000	-	8	0.138	0.046	4	0.065	0.031	13	0.082	0.022	27	0.149	0.027	25	0.096	0.018	18	0.131	0.029	20	0.084	0.018		
15	0	0.000	-	3	0.091	0.051	2	0.034	0.024	2	0.032	0.023	10	0.063	0.019	39	0.215	0.031	31	0.119	0.020	24	0.175	0.033	30	0.127	0.022		
16	0	0.000	-	1	0.030	0.030	2	0.034	0.024	0	0.000	-	6	0.038	0.015	15	0.083	0.021	21	0.080	0.017	19	0.139	0.030	27	0.114	0.021		
17	0	0.000	-	0	0.000	-	2	0.034	0.024	1	0.016	0.016	5	0.031	0.014	6	0.033	0.013	19	0.073	0.016	12	0.088	0.024	21	0.089	0.018		
18	0	0.000	-	0	0.000	-	3	0.052	0.029	0	0.000	-	1	0.006	0.006	4	0.022	0.011	4	0.015	0.008	10	0.073	0.022	17	0.072	0.017		
19	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	2	0.013	0.009	3	0.017	0.010	1	0.004	0.004	7	0.051	0.019	8	0.034	0.012		
20	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	1	0.006	0.006	6	0.023	0.009	3	0.022	0.013	4	0.017	0.008		
21	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	2	0.008	0.005	1	0.007	0.007	2	0.008	0.006		
22	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	2	0.015	0.010	0	0.000	-		
23	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-	1	0.007	0.007	0	0.000	-		
Total	25			33			58			62			159			181			261			137			237			292	

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WHITTIER:

Age	1999			2000			2001			2002		
	n	p	SE(p)									
3	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
4	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
5	0	0.000	-	0	0.000	-	0	0.000	-	0	0.000	-
6	0	0.000	-	2	0.017	0.012	1	0.009	0.009	1	0.009	0.009
7	2	0.039	0.027	4	0.034	0.017	0	0.000	-	1	0.009	0.009
8	1	0.020	0.020	5	0.043	0.019	12	0.113	0.031	2	0.019	0.013
9	7	0.137	0.049	3	0.026	0.015	5	0.047	0.021	6	0.056	0.022
10	7	0.137	0.049	13	0.111	0.029	7	0.066	0.024	4	0.037	0.018
11	7	0.137	0.049	19	0.162	0.034	14	0.132	0.033	10	0.093	0.028
12	6	0.118	0.046	11	0.094	0.027	13	0.123	0.032	18	0.168	0.036
13	8	0.157	0.051	16	0.137	0.032	9	0.085	0.027	12	0.112	0.031
14	2	0.039	0.027	14	0.120	0.030	11	0.104	0.030	8	0.075	0.026
15	3	0.059	0.033	10	0.085	0.026	8	0.075	0.026	11	0.103	0.029
16	2	0.039	0.027	12	0.103	0.028	12	0.113	0.031	14	0.131	0.033
17	4	0.078	0.038	4	0.034	0.017	5	0.047	0.021	8	0.075	0.026
18	2	0.039	0.027	4	0.034	0.017	4	0.038	0.019	7	0.065	0.024
19	0	0.000	-	0	0.000	-	5	0.047	0.021	4	0.037	0.018
20	0	0.000	-	0	0.000	-	0	0.000	-	1	0.009	0.009
Total	51			117			106			107		

Appendix B2.—Estimated length composition of the lingcod sport harvest landed at Kodiak, Homer, Seward, Whittier, Cordova, and Valdez, 1993–2002.

KODIAK:											
Parameter	Length	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
No. Fish	40	0	0	0	0	0	0	0	0	0	0
	45	0	0	0	0	0	0	0	0	0	0
	50	0	0	0	0	0	0	0	0	0	0
	55	0	0	0	0	0	0	0	0	0	1
	60	1	0	0	0	0	0	0	2	1	0
	65	8	3	0	0	0	0	2	1	0	4
	70	9	8	2	2	2	0	0	5	0	7
	75	11	11	4	1	0	4	2	5	0	2
	80	8	20	12	7	1	2	7	4	1	4
	85	14	23	23	10	2	6	10	4	2	3
	90	7	8	22	15	3	20	15	17	5	5
	95	4	11	8	11	3	9	4	12	10	7
	100	3	12	11	3	2	6	6	7	3	2
	105	1	6	16	10	2	4	3	6	0	1
	110	1	1	11	8	6	4	2	7	1	0
	115	5	7	6	2	6	13	5	7	1	0
	120	2	3	6	3	2	6	3	6	0	3
	125	0	1	4	4	1	2	1	1	2	0
	130	0	0	0	0	1	2	0	1	1	0
	135	0	0	0	0	0	1	0	0	0	0
	140	0	0	0	0	0	0	0	0	0	0
	Total	74	114	125	76	31	79	60	85	27	39
Proportion (p)	40	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	45	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	50	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	55	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.026
	60	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.024	0.037	0.000
	65	0.108	0.026	0.000	0.000	0.000	0.000	0.033	0.012	0.000	0.103
	70	0.122	0.070	0.016	0.026	0.065	0.000	0.000	0.059	0.000	0.179
	75	0.149	0.096	0.032	0.013	0.000	0.051	0.033	0.059	0.000	0.051
	80	0.108	0.175	0.096	0.092	0.032	0.025	0.117	0.047	0.037	0.103
	85	0.189	0.202	0.184	0.132	0.065	0.076	0.167	0.047	0.074	0.077
	90	0.095	0.070	0.176	0.197	0.097	0.253	0.250	0.200	0.185	0.128
	95	0.054	0.096	0.064	0.145	0.097	0.114	0.067	0.141	0.370	0.179
	100	0.041	0.105	0.088	0.039	0.065	0.076	0.100	0.082	0.111	0.051
	105	0.014	0.053	0.128	0.132	0.065	0.051	0.050	0.071	0.000	0.026
	110	0.014	0.009	0.088	0.105	0.194	0.051	0.033	0.082	0.037	0.000
	115	0.068	0.061	0.048	0.026	0.194	0.165	0.083	0.082	0.037	0.000
	120	0.027	0.026	0.048	0.039	0.065	0.076	0.050	0.071	0.000	0.077
	125	0.000	0.009	0.032	0.053	0.032	0.025	0.017	0.012	0.074	0.000
	130	0.000	0.000	0.000	0.000	0.032	0.025	0.000	0.012	0.037	0.000
	135	0.000	0.000	0.000	0.000	0.013	0.000	0.000	0.000	0.000	0.000
	140	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE(p)	40	-	-	-	-	-	-	-	-	-	-
	45	-	-	-	-	-	-	-	-	-	-
	50	-	-	-	-	-	-	-	-	-	-
	55	-	-	-	-	-	-	-	-	-	0.026
	60	0.014	-	-	-	-	-	-	0.017	0.037	-
	65	0.036	0.015	-	-	-	0.023	0.012	-	0.049	-
	70	0.038	0.024	0.011	0.018	0.045	-	-	0.026	-	0.062
	75	0.042	0.028	0.016	0.013	-	0.025	0.023	0.026	-	0.036
	80	0.036	0.036	0.026	0.033	0.032	0.018	0.042	0.023	0.037	0.049
	85	0.046	0.038	0.035	0.039	0.045	0.030	0.049	0.023	0.051	0.043
	90	0.034	0.024	0.034	0.046	0.054	0.049	0.056	0.044	0.076	0.054
	95	0.026	0.028	0.022	0.041	0.054	0.036	0.032	0.038	0.095	0.062
	100	0.023	0.029	0.025	0.022	0.045	0.030	0.039	0.030	0.062	0.036
	105	0.014	0.021	0.030	0.039	0.045	0.025	0.028	0.028	-	0.026
	110	0.014	0.009	0.025	0.035	0.072	0.025	0.023	0.030	0.037	-
	115	0.029	0.023	0.019	0.018	0.072	0.042	0.036	0.030	0.037	-
	120	0.019	0.015	0.019	0.022	0.045	0.030	0.028	0.028	-	0.043
	125	-	0.009	0.016	0.026	0.032	0.018	0.017	0.012	0.051	-
	130	-	-	-	-	0.032	0.018	-	0.012	0.037	-
	135	-	-	-	-	-	0.013	-	-	-	-
	140	-	-	-	-	-	-	-	-	-	-

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Appendix B2.–Page 2 of 5.

HOMER:											
Parameter	Length	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
No. Fish	40	0	0	0	0	0	0	0	0	0	0
	45	0	0	0	0	0	0	0	0	0	0
	50	0	0	0	0	0	0	0	0	0	0
	55	0	0	0	0	0	0	0	0	0	0
	60	0	0	0	0	0	0	0	0	0	0
	65	0	0	0	0	0	0	0	0	0	0
	70	2	0	0	0	0	0	0	0	0	1
	75	1	0	0	0	0	0	0	0	0	1
	80	1	0	0	0	0	0	0	0	0	0
	85	1	1	0	2	0	0	0	1	0	2
	90	2	4	6	8	1	6	12	12	4	9
	95	3	5	0	8	6	8	11	23	21	10
	100	1	2	0	0	3	7	11	19	13	12
	105	2	4	2	3	2	3	19	14	8	14
	110	2	3	4	8	4	2	12	20	12	8
	115	0	2	2	3	2	4	8	10	15	14
	120	3	4	0	5	3	4	6	12	14	15
	125	1	2	1	1	1	3	8	16	14	20
	130	0	1	0	2	0	2	6	8	8	10
	135	0	0	0	1	0	4	2	4	4	7
	140	0	0	0	0	0	0	0	0	3	3
Total		19	28	15	41	22	43	95	139	116	126
Proportion(p)	40	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	45	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	50	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	55	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	65	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	70	0.105	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008
	75	0.053	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008
	80	0.053	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	85	0.053	0.036	0.000	0.049	0.000	0.000	0.000	0.007	0.000	0.016
	90	0.105	0.143	0.400	0.195	0.045	0.140	0.126	0.086	0.034	0.071
	95	0.158	0.179	0.000	0.195	0.273	0.186	0.116	0.165	0.181	0.079
	100	0.053	0.071	0.000	0.000	0.136	0.163	0.116	0.137	0.112	0.095
	105	0.105	0.143	0.133	0.073	0.091	0.070	0.200	0.101	0.069	0.111
	110	0.105	0.107	0.267	0.195	0.182	0.047	0.126	0.144	0.103	0.063
	115	0.000	0.071	0.133	0.073	0.091	0.093	0.084	0.072	0.129	0.111
	120	0.158	0.143	0.000	0.122	0.136	0.093	0.063	0.086	0.121	0.119
	125	0.053	0.071	0.067	0.024	0.045	0.070	0.084	0.115	0.121	0.159
	130	0.000	0.036	0.000	0.049	0.000	0.047	0.063	0.058	0.069	0.079
	135	0.000	0.000	0.000	0.024	0.000	0.093	0.021	0.029	0.034	0.056
	140	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.026	0.026	0.024
SE(p)	40	-	-	-	-	-	-	-	-	-	-
	45	-	-	-	-	-	-	-	-	-	-
	50	-	-	-	-	-	-	-	-	-	-
	55	-	-	-	-	-	-	-	-	-	-
	60	-	-	-	-	-	-	-	-	-	-
	65	-	-	-	-	-	-	-	-	-	-
	70	0.072	-	-	-	-	-	-	-	-	0.008
	75	0.053	-	-	-	-	-	-	-	-	0.008
	80	0.053	-	-	-	-	-	-	-	-	-
	85	0.053	0.036	-	0.034	-	-	-	0.007	-	0.011
	90	0.072	0.067	0.131	0.063	0.045	0.053	0.034	0.024	0.017	0.023
	95	0.086	0.074	-	0.063	0.097	0.060	0.033	0.032	0.036	0.024
	100	0.053	0.050	-	-	0.075	0.057	0.033	0.029	0.029	0.026
	105	0.072	0.067	0.091	0.041	0.063	0.039	0.041	0.026	0.024	0.028
	110	0.072	0.060	0.118	0.063	0.084	0.032	0.034	0.030	0.028	0.022
	115	-	0.050	0.091	0.041	0.063	0.045	0.029	0.022	0.031	0.028
	120	0.086	0.067	-	0.052	0.075	0.045	0.025	0.024	0.030	0.029
	125	0.053	0.050	0.067	0.024	0.045	0.039	0.029	0.027	0.030	0.033
	130	-	0.036	-	0.034	-	0.032	0.025	0.020	0.024	0.024
	135	-	-	-	0.024	-	0.045	0.015	0.014	0.017	0.020
	140	-	-	-	-	-	-	-	-	0.015	0.014

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Appendix B2.–Page 3 of 5.

SEWARD:											
Parameter	Length	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
No. Fish	40	0	0	0	0	0	0	0	0	0	0
	45	0	0	1	0	0	0	0	0	1	0
	50	0	0	0	0	0	0	0	0	0	0
	55	0	0	0	0	0	0	0	1	0	0
	60	0	0	0	0	0	0	0	0	0	0
	65	0	0	0	0	0	0	0	0	1	0
	70	0	0	0	0	0	0	0	0	1	0
	75	1	0	7	0	0	0	1	0	0	0
	80	2	1	2	0	1	0	1	0	0	0
	85	17	13	8	0	1	5	5	4	1	0
	90	49	57	59	14	3	19	25	15	18	1
	95	58	71	52	29	21	25	29	33	22	14
	100	46	49	32	12	7	23	40	26	20	5
	105	32	47	30	11	13	9	32	29	19	10
	110	54	50	41	8	14	18	22	48	26	7
	115	28	54	41	13	12	20	34	42	19	17
	120	17	44	26	8	11	17	30	37	13	16
	125	9	24	9	6	7	12	28	17	11	11
	130	4	10	3	4	1	6	12	7	4	10
	135	0	2	1	0	0	0	1	1	1	1
	140	0	0	0	0	0	0	0	0	0	0
	Total	317	422	312	105	91	154	260	260	157	92
Proportion(p)	40	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	45	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.006	0.000
	50	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	55	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000
	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	65	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.000
	70	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.000
	75	0.003	0.000	0.022	0.000	0.000	0.000	0.004	0.000	0.000	0.000
	80	0.006	0.002	0.006	0.000	0.011	0.000	0.004	0.000	0.000	0.000
	85	0.054	0.031	0.026	0.000	0.011	0.032	0.019	0.015	0.006	0.000
	90	0.155	0.135	0.189	0.133	0.033	0.123	0.096	0.058	0.115	0.011
	95	0.183	0.168	0.167	0.276	0.231	0.162	0.112	0.127	0.140	0.152
	100	0.145	0.116	0.103	0.114	0.077	0.149	0.154	0.100	0.127	0.054
	105	0.101	0.111	0.096	0.105	0.143	0.058	0.123	0.112	0.121	0.109
	110	0.170	0.118	0.131	0.076	0.154	0.117	0.085	0.185	0.166	0.076
	115	0.088	0.128	0.131	0.124	0.132	0.130	0.131	0.162	0.121	0.185
	120	0.054	0.104	0.083	0.076	0.121	0.110	0.115	0.142	0.083	0.174
	125	0.028	0.057	0.029	0.057	0.077	0.078	0.108	0.065	0.070	0.120
	130	0.013	0.024	0.010	0.038	0.011	0.039	0.046	0.027	0.025	0.109
	135	0.000	0.005	0.003	0.000	0.000	0.000	0.004	0.004	0.006	0.011
	140	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE(p)	40	-	-	-	-	-	-	-	-	-	-
	45	-	-	0.003	-	-	-	-	-	0.006	-
	50	-	-	-	-	-	-	-	-	-	-
	55	-	-	-	-	-	-	-	0.004	-	-
	60	-	-	-	-	-	-	-	-	-	-
	65	-	-	-	-	-	-	-	-	0.006	-
	70	-	-	-	-	-	-	-	-	0.006	-
	75	0.003	-	0.008	-	-	-	0.004	-	-	-
	80	0.004	0.002	0.005	-	0.011	-	0.004	-	-	-
	85	0.013	0.008	0.009	-	0.011	0.014	0.009	0.008	0.006	-
	90	0.020	0.017	0.022	0.033	0.019	0.027	0.018	0.014	0.026	0.011
	95	0.022	0.018	0.021	0.044	0.044	0.030	0.020	0.021	0.028	0.038
	100	0.020	0.016	0.017	0.031	0.028	0.029	0.022	0.019	0.027	0.024
	105	0.017	0.015	0.017	0.030	0.037	0.019	0.020	0.020	0.026	0.033
	110	0.021	0.016	0.019	0.026	0.038	0.026	0.017	0.024	0.030	0.028
	115	0.016	0.016	0.019	0.032	0.036	0.027	0.021	0.023	0.026	0.041
	120	0.013	0.015	0.016	0.026	0.034	0.025	0.020	0.022	0.022	0.040
	125	0.009	0.011	0.009	0.023	0.028	0.022	0.019	0.015	0.020	0.034
	130	0.006	0.007	0.006	0.019	0.011	0.016	0.013	0.010	0.013	0.033
	135	-	0.003	0.003	-	-	-	0.004	0.004	0.006	0.011
	140	-	-	-	-	-	-	-	-	-	-

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WHITTIER:						CORDOVA:		
Parameter	Length	1999	2000	2001	2002	Parameter	Length ^a	1999
No. Fish	40	0	0	0	0	No. Fish	40	0
	45	0	0	0	0		45	0
	50	0	0	0	0		50	0
	55	0	0	0	0		55	0
	60	0	0	0	0		60	0
	65	0	0	0	0		65	0
	70	0	0	0	0		70	0
	75	0	0	0	0		75	0
	80	0	0	0	0		80	0
	85	0	0	1	0		85	0
	90	0	9	16	3		90	2
	95	9	21	16	19		95	5
	100	11	16	11	27		100	2
	105	10	19	17	6		105	3
	110	6	17	12	12		110	1
	115	9	17	24	14		115	0
	120	7	17	13	15		120	0
	125	1	9	5	8		125	0
	130	1	2	1	3		130	0
	135	0	0	1	0		135	0
	140	0	0	0	0		140	0
Total		54	127	117	107	Total		13
Proportion(p)	40	0.000	0.000	0.000	0.000	Proportion(p)	40	0.000
	45	0.000	0.000	0.000	0.000		45	0.000
	50	0.000	0.000	0.000	0.000		50	0.000
	55	0.000	0.000	0.000	0.000		55	0.000
	60	0.000	0.000	0.000	0.000		60	0.000
	65	0.000	0.000	0.000	0.000		65	0.000
	70	0.000	0.000	0.000	0.000		70	0.000
	75	0.000	0.000	0.000	0.000		75	0.000
	80	0.000	0.000	0.000	0.000		80	0.000
	85	0.000	0.000	0.009	0.000		85	0.000
	90	0.000	0.071	0.137	0.028		90	0.154
	95	0.167	0.165	0.137	0.178		95	0.385
	100	0.204	0.126	0.094	0.252		100	0.154
	105	0.185	0.150	0.145	0.056		105	0.231
	110	0.111	0.134	0.103	0.112		110	0.077
	115	0.167	0.134	0.205	0.131		115	0.000
	120	0.130	0.134	0.111	0.140		120	0.000
	125	0.019	0.071	0.043	0.075		125	0.000
	130	0.019	0.016	0.009	0.028		130	0.000
	135	0.000	0.000	0.009	0.000		135	0.000
	140	0.000	0.000	0.000	0.000		140	0.000
SE(p)	40	-	-	-	-	SE(p)	40	-
	45	-	-	-	-		45	-
	50	-	-	-	-		50	-
	55	-	-	-	-		55	-
	60	-	-	-	-		60	-
	65	-	-	-	-		65	-
	70	-	-	-	-		70	-
	75	-	-	-	-		75	-
	80	-	-	-	-		80	-
	85	-	-	0.009	-		85	-
	90	-	0.023	0.032	0.016		90	0.104
	95	0.051	0.033	0.032	0.037		95	0.140
	100	0.055	0.030	0.027	0.042		100	0.104
	105	0.053	0.032	0.033	0.022		105	0.122
	110	0.043	0.030	0.028	0.031		110	0.077
	115	0.051	0.030	0.037	0.033		115	-
	120	0.046	0.030	0.029	0.034		120	-
	125	0.019	0.023	0.019	0.026		125	-
	130	0.019	0.011	0.009	0.016		130	-
	135	-	-	0.009	-		135	-
	140	-	-	-	-		140	-

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VALDEZ:											
Parameter	Length	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
No. Fish	40	0	0	0	0	0	0	0	0	0	0
	45	0	0	0	0	0	0	0	0	0	0
	50	0	0	0	0	0	0	0	0	0	0
	55	0	0	0	0	0	0	0	0	0	0
	60	0	0	0	0	1	0	1	0	0	0
	65	0	0	0	0	0	0	0	0	0	0
	70	0	0	0	0	0	0	0	0	0	0
	75	0	0	0	0	0	0	0	0	0	0
	80	0	0	1	1	1	0	0	0	0	0
	85	2	1	5	0	1	0	6	1	1	1
	90	8	6	7	14	9	20	26	6	17	10
	95	2	7	9	12	20	26	41	11	23	23
	100	2	6	8	10	23	25	45	10	23	27
	105	5	5	5	10	38	18	50	9	38	25
	110	3	2	8	6	30	22	50	30	45	51
	115	2	1	6	6	19	39	40	33	36	51
	120	1	3	6	2	15	15	40	23	29	67
	125	0	1	2	1	5	10	16	14	27	36
	130	0	0	1	0	2	6	6	11	2	13
	135	0	0	0	0	0	2	0	3	2	4
	140	0	0	0	0	0	1	0	1	0	0
	Total	25	32	58	62	164	184	321	152	243	308
Proportion(p)	40	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	45	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	50	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	55	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	60	0.000	0.000	0.000	0.000	0.006	0.000	0.003	0.000	0.000	0.000
	65	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	70	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	75	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	80	0.000	0.000	0.017	0.016	0.006	0.000	0.000	0.000	0.000	0.000
	85	0.080	0.031	0.086	0.000	0.006	0.000	0.019	0.007	0.004	0.003
	90	0.320	0.188	0.121	0.226	0.055	0.109	0.081	0.039	0.070	0.032
	95	0.080	0.219	0.155	0.194	0.122	0.141	0.128	0.072	0.095	0.075
	100	0.080	0.188	0.138	0.161	0.140	0.136	0.140	0.066	0.095	0.088
	105	0.200	0.156	0.086	0.161	0.232	0.098	0.156	0.059	0.156	0.081
	110	0.120	0.063	0.138	0.097	0.183	0.120	0.156	0.197	0.185	0.166
	115	0.080	0.031	0.103	0.097	0.116	0.212	0.125	0.217	0.148	0.166
	120	0.040	0.094	0.103	0.032	0.091	0.082	0.125	0.151	0.119	0.218
	125	0.000	0.031	0.034	0.016	0.030	0.054	0.050	0.092	0.111	0.117
	130	0.000	0.000	0.017	0.000	0.012	0.033	0.019	0.072	0.008	0.042
	135	0.000	0.000	0.000	0.000	0.000	0.011	0.000	0.020	0.008	0.013
	140	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.007	0.000	0.000
SE(p)	40	-	-	-	-	-	-	-	-	-	-
	45	-	-	-	-	-	-	-	-	-	-
	50	-	-	-	-	-	-	-	-	-	-
	55	-	-	-	-	-	-	-	-	-	-
	60	-	-	-	-	0.006	-	0.003	-	-	-
	65	-	-	-	-	-	-	-	-	-	-
	70	-	-	-	-	-	-	-	-	-	-
	75	-	-	-	-	-	-	-	-	-	-
	80	-	-	0.017	0.016	0.006	-	-	-	-	-
	85	0.055	0.031	0.037	-	0.006	-	0.008	0.007	0.004	0.003
	90	0.095	0.070	0.043	0.054	0.018	0.023	0.015	0.016	0.016	0.010
	95	0.055	0.074	0.048	0.051	0.026	0.026	0.019	0.021	0.019	0.015
	100	0.055	0.070	0.046	0.047	0.027	0.025	0.019	0.020	0.019	0.016
	105	0.082	0.065	0.037	0.047	0.033	0.022	0.020	0.019	0.023	0.016
	110	0.066	0.043	0.046	0.038	0.030	0.024	0.020	0.032	0.025	0.021
	115	0.055	0.031	0.040	0.038	0.025	0.030	0.018	0.034	0.023	0.021
	120	0.040	0.052	0.040	0.023	0.023	0.020	0.018	0.029	0.021	0.024
	125	-	0.031	0.024	0.016	0.013	0.017	0.012	0.024	0.020	0.018
	130	-	-	0.017	-	0.009	0.013	0.008	0.021	0.006	0.011
	135	-	-	-	-	-	0.008	-	0.011	0.006	0.006
	140	-	-	-	-	-	0.005	-	0.007	-	-

Note: Lengths are mid-points of 5-cm total length categories.

Appendix B3.-Estimated sex composition of the lingcod sport harvest landed at Kodiak, Homer, Seward, Whittier, Cordova, and Valdez, 1993-2002.

Port	Year	Sample Size	No. Female	p Female	p Male	SE (p)
Kodiak	1993	69	21	0.304	0.696	0.056
	1994	110	36	0.327	0.673	0.045
	1995	115	55	0.478	0.522	0.047
	1996	61	30	0.492	0.508	0.065
	1997	29	18	0.621	0.379	0.092
	1998	79	42	0.532	0.468	0.057
	1999	59	20	0.339	0.661	0.062
	2000	84	38	0.452	0.548	0.055
	2001	27	6	0.222	0.778	0.082
	2002	40	10	0.250	0.750	0.069
Homer	1993	18	10	0.556	0.444	0.121
	1994	30	19	0.633	0.367	0.089
	1995	16	13	0.813	0.188	0.101
	1996	41	31	0.756	0.244	0.068
	1997	22	14	0.636	0.364	0.105
	1998	42	30	0.714	0.286	0.071
	1999	89	65	0.730	0.270	0.047
	2000	136	96	0.706	0.294	0.039
	2001	110	68	0.618	0.382	0.047
	2002	123	94	0.764	0.236	0.038
Seward	1993	308	212	0.688	0.312	0.026
	1994	427	303	0.710	0.290	0.022
	1995	305	191	0.626	0.374	0.028
	1996	92	60	0.522	0.478	0.044
	1997	76	64	0.842	0.158	0.042
	1998	143	108	0.755	0.245	0.036
	1999	255	196	0.769	0.231	0.026
	2000	259	203	0.784	0.216	0.026
	2001	155	111	0.716	0.284	0.036
	2002	94	77	0.819	0.181	0.040
Whittier	1999	53	49	0.925	0.075	0.037
	2000	127	106	0.835	0.165	0.033
	2001	113	85	0.752	0.248	0.041
	2002	109	66	0.606	0.394	0.047
Valdez	1993	19	15	0.789	0.211	0.096
	1994	32	26	0.813	0.188	0.070
	1995	57	50	0.877	0.123	0.044
	1996	60	37	0.617	0.383	0.063
	1997	166	154	0.928	0.072	0.020
	1998	180	150	0.833	0.167	0.028
	1999	318	263	0.827	0.173	0.021
	2000	150	134	0.893	0.107	0.025
	2001	243	205	0.844	0.156	0.023
	2002	308	271	0.880	0.120	0.019
Cordova	1999	13	9	0.692	0.308	0.133

Appendix B4.-Estimated distribution of sport fishing effort for lingcod, bottomfish, or bottomfish and salmon after June 30 at Kodiak, Homer, Seward, Valdez, Whittier, and Cordova, 1993-2002.

Port	User Group	Parameter	Stat Area	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Kodiak	Charter	Reported Effort (angler-days)	525701	0	0	0	10	0	40	19	108	16	12
			525702	0	0	0	0	0	5	4	0	11	17
			525703	0	0	0	0	4	4	0	0	0	0
			525731	6	0	7	9	12	50	22	11	9	59
			525732	0	0	5	4	6	28	0	0	7	0
			525733	54	72	88	81	185	544	188	192	186	367
			525805	9	0	0	0	0	0	5	0	0	0
			525806	0	0	0	0	0	0	0	6	0	0
			535734	0	0	0	0	0	4	0	0	0	0
			535803	0	0	0	0	0	4	0	0	0	0
			Total	69	72	100	104	207	679	238	317	229	455
		Proportion (p)	525701	0.000	0.000	0.000	0.096	0.000	0.059	0.080	0.341	0.070	0.026
			525702	0.000	0.000	0.000	0.000	0.000	0.007	0.017	0.000	0.048	0.037
			525703	0.000	0.000	0.000	0.000	0.019	0.006	0.000	0.000	0.000	0.000
			525731	0.087	0.000	0.070	0.087	0.058	0.074	0.092	0.035	0.039	0.130
			525732	0.000	0.000	0.050	0.038	0.029	0.041	0.000	0.000	0.031	0.000
			525733	0.783	1.000	0.880	0.779	0.894	0.801	0.790	0.606	0.812	0.807
			525805	0.130	0.000	0.000	0.000	0.000	0.000	0.021	0.000	0.000	0.000
			525806	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.019	0.000	0.000
			535734	0.000	0.000	0.000	0.000	0.000	0.006	0.000	0.000	0.000	0.000
			535803	0.000	0.000	0.000	0.000	0.000	0.006	0.000	0.000	0.000	0.000
		SE(p)	525701	-	-	-	0.029	-	0.009	0.018	0.027	0.017	0.008
			525702	-	-	-	-	-	0.003	0.008	-	0.014	0.009
			525703	-	-	-	-	0.010	0.003	-	-	-	
			525731	0.034	-	0.026	0.028	0.016	0.010	0.019	0.010	0.013	0.016
			525732	-	-	0.022	0.019	0.012	0.008	-	-	0.011	-
			525733	0.050	0.000	0.033	0.041	0.021	0.015	0.026	0.027	0.026	0.019
			525805	0.041	-	-	-	-	-	0.009	-	-	-
			525806	-	-	-	-	-	-	0.008	-	-	-
			535734	-	-	-	-	-	0.003	-	-	-	-
			535803	-	-	-	-	-	0.003	-	-	-	-
Kodiak	Private	Reported Effort (angler-days)	515801	0	0	0	0	4	0	0	0	0	3
			525701	0	0	0	0	0	0	2	29	9	0
			525731	0	3	6	29	33	102	13	5	14	125
			525732	6	3	5	0	0	0	4	16	5	0
			525733	47	39	78	85	98	268	76	140	87	180
			525805	0	3	3	0	0	2	0	0	0	3
			525806	0	0	0	0	0	0	0	0	0	4
			525807	0	0	0	0	0	0	0	4	0	0
			535803	0	4	0	0	0	4	0	0	0	0
			Total	53	52	92	114	135	376	95	194	115	315
		Proportion (p)	515801	0.000	0.000	0.000	0.000	0.030	0.000	0.000	0.000	0.000	0.010
			525701	0.000	0.000	0.000	0.000	0.000	0.000	0.021	0.149	0.078	0.000
			525731	0.000	0.058	0.065	0.254	0.244	0.271	0.137	0.026	0.122	0.397
			525732	0.113	0.058	0.054	0.000	0.000	0.000	0.042	0.082	0.043	0.000
			525733	0.887	0.750	0.848	0.746	0.726	0.713	0.800	0.722	0.757	0.571
			525805	0.000	0.058	0.033	0.000	0.000	0.005	0.000	0.000	0.000	0.010
			525806	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.013
			525807	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.021	0.000	0.000
			535803	0.000	0.077	0.000	0.000	0.000	0.011	0.000	0.000	0.000	0.000
		SE(p)	515801	-	-	-	-	0.015	-	-	-	-	0.005
			525701	-	-	-	-	-	-	0.015	0.026	0.025	-
			525731	-	0.033	0.026	0.041	0.037	0.023	0.035	0.011	0.031	0.028
			525732	0.044	0.033	0.024	-	-	-	0.021	0.020	0.019	-
			525733	0.044	0.061	0.038	0.041	0.039	0.023	0.041	0.032	0.040	0.028
			525805	-	0.033	0.019	-	-	0.004	-	-	-	0.005
			525806	-	-	-	-	-	-	-	-	-	0.006
			525807	-	-	-	-	-	-	-	0.010	-	-
			535803	-	0.037	-	-	0.005	-	-	-	-	-

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Port	User Group	Parameter	Stat Area	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	
Homer	Charter	Reported Effort (angler-days)	515831	0	6	0	0	0	0	0	0	0	14	
			515903	0	6	0	0	0	0	5	22	12	52	
			515904	0	0	0	0	0	0	0	0	0	8	
			515905	0	7	0	0	0	0	5	0	67	32	
			515906	0	0	0	0	0	0	0	0	2	10	
			515907	0	0	0	0	0	6	0	0	0	4	
			515933	0	0	0	0	0	14	0	0	0	0	
			515936	0	0	5	8	0	6	0	4	0	3	
			515937	0	0	0	0	0	0	0	0	4	0	
			525837	0	0	0	0	0	0	0	0	0	5	
			525901	0	0	0	0	0	0	0	0	0	20	
			525902	0	7	0	0	0	0	0	24	5	16	
			525931	0	0	0	4	0	10	22	4	16	11	
			Total	0	26	5	12	0	36	32	54	106	175	
		Proportion (p)	515831	0.000	0.231	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	
			515903	0.000	0.231	0.000	0.000	0.000	0.000	0.156	0.407	0.113	0.297	
			515904	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046	
			515905	0.000	0.269	0.000	0.000	0.000	0.000	0.156	0.000	0.632	0.183	
			515906	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.019	0.057	
			515907	0.000	0.000	0.000	0.000	0.000	0.167	0.000	0.000	0.000	0.023	
			515933	0.000	0.000	0.000	0.000	0.000	0.389	0.000	0.000	0.000	0.000	
			515936	0.000	0.000	1.000	0.667	0.000	0.167	0.000	0.074	0.000	0.017	
			515937	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.038	0.000	
			525837	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.029	
			525901	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.114	
			525902	0.000	0.269	0.000	0.000	0.000	0.000	0.000	0.000	0.444	0.047	0.091
			525931	0.000	0.000	0.000	0.333	0.000	0.278	0.688	0.074	0.151	0.063	
		SE(p)	515831	-	0.084	-	-	-	-	-	-	-	0.021	
			515903	-	0.084	-	-	-	0.065	0.067	0.031	0.035		
			515904	-	-	-	-	-	-	-	-	-	0.016	
			515905	-	0.089	-	-	-	0.065	-	0.047	-	0.029	
			515906	-	-	-	-	-	-	-	0.013	0.018		
			515907	-	-	-	-	0.063	-	-	-	-	0.011	
			515933	-	-	-	-	0.082	-	-	-	-	-	
			515936	-	-	0.000	0.142	-	0.063	-	0.036	-	0.010	
			515937	-	-	-	-	-	-	-	0.019	-	-	
			525837	-	-	-	-	-	-	-	-	-	0.013	
			525901	-	-	-	-	-	-	-	-	-	0.024	
			525902	-	0.089	-	-	-	-	-	0.068	0.021	0.022	
			525931	-	-	0.142	-	0.076	0.083	0.036	0.035	0.035	0.018	
Homer	Private	Reported Effort (angler-days)	515903	0	0	0	0	0	0	3	0	3	0	
			515904	0	0	0	0	0	0	2	0	0	0	
			515906	0	0	0	0	0	0	0	0	0	14	
			515907	0	0	0	2	17	0	0	0	4	0	
			515908	0	0	0	0	0	0	0	0	0	9	
			515931	0	0	0	0	0	2	0	0	0	0	
			515932	0	0	0	5	0	0	2	0	0	2	
			515933	0	0	6	0	10	3	2	0	0	2	
			515934	0	0	1	0	0	0	0	0	0	0	
			515935	0	0	2	0	2	6	0	0	0	0	
			515936	0	0	6	6	2	0	0	0	0	7	
			515937	0	0	0	2	0	0	0	0	0	4	
			515939	0	0	4	0	0	0	0	0	0	0	
			525901	0	0	0	0	0	0	0	0	4	4	
			525931	0	0	0	12	5	0	0	0	4	0	
			Total	0	0	19	27	36	11	9	0	15	42	
		Proportion (p)	515903	0.000	0.000	0.000	0.000	0.000	0.333	0.000	0.200	0.000		
			515904	0.000	0.000	0.000	0.000	0.000	0.000	0.222	0.000	0.000	0.000	
			515906	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.333	
			515907	0.000	0.000	0.000	0.074	0.472	0.000	0.000	0.000	0.267	0.000	
			515908	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.214	
			515931	0.000	0.000	0.000	0.000	0.000	0.182	0.000	0.000	0.000	0.000	
			515932	0.000	0.000	0.000	0.185	0.000	0.000	0.222	0.000	0.000	0.048	
			515933	0.000	0.000	0.316	0.000	0.278	0.273	0.222	0.000	0.000	0.048	
			515934	0.000	0.000	0.053	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
			515935	0.000	0.000	0.105	0.000	0.056	0.545	0.000	0.000	0.000	0.000	
			515936	0.000	0.000	0.316	0.222	0.056	0.000	0.000	0.000	0.000	0.167	

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Port	User Group	Parameter	Stat Area	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
		515937	0.000	0.000	0.000	0.074	0.000	0.000	0.000	0.000	0.000	0.000	0.095
		515939	0.000	0.000	0.211	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		525901	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.267	0.095
		525931	0.000	0.000	0.000	0.444	0.139	0.000	0.000	0.000	0.000	0.267	0.000
	SE(p)	515903	-	-	-	-	-	-	0.167	-	0.107	-	-
		515904	-	-	-	-	-	-	0.147	-	-	-	-
		515906	-	-	-	-	-	-	-	-	-	0.074	-
		515907	-	-	-	0.051	0.084	-	-	-	0.118	-	-
		515908	-	-	-	-	-	-	-	-	-	0.064	-
		515931	-	-	-	-	-	0.122	-	-	-	-	-
		515932	-	-	-	0.076	-	-	0.147	-	-	0.033	-
		515933	-	-	0.110	-	0.076	0.141	0.147	-	-	0.033	-
		515934	-	-	0.053	-	-	-	-	-	-	-	-
		515935	-	-	0.072	-	0.039	0.157	-	-	-	-	-
		515936	-	-	0.110	0.082	0.039	-	-	-	-	0.058	-
		515937	-	-	-	0.051	-	-	-	-	-	0.046	-
		515939	-	-	0.096	-	-	-	-	-	-	-	-
		525901	-	-	-	-	-	-	-	-	0.118	0.046	-
		525931	-	-	-	0.097	0.058	-	-	-	-	0.118	-
Seward	Charter	Reported Effort (angler-days)	475931	0	0	0	0	0	0	8	16	53	6
		475932	0	0	0	0	0	0	0	7	0	0	0
		475933	0	13	4	0	0	0	0	8	0	34	17
		475934	0	23	0	0	0	7	0	14	74	126	-
		476003	0	0	0	0	0	0	0	8	0	0	-
		485931	0	6	38	12	0	7	6	13	43	31	-
		485932	12	18	20	0	0	14	19	12	91	343	-
		485933	14	0	0	0	0	20	0	0	0	0	27
		485934	0	0	0	0	0	0	12	0	6	5	-
		485935	41	20	15	0	0	22	16	43	74	129	-
		486001	0	12	11	0	0	0	0	0	0	0	0
		495902	0	15	0	0	0	0	0	6	12	0	36
		495931	0	0	0	0	0	0	0	6	0	20	-
		495932	32	67	23	0	0	10	99	121	162	356	-
		495934	0	20	0	0	5	10	3	37	18	107	-
		495935	0	0	12	0	0	0	16	12	0	6	-
		495936	0	7	0	0	0	0	0	0	7	10	-
		495938	48	22	33	0	0	16	23	29	26	29	-
		496001	0	0	0	3	0	0	0	0	0	0	18
		505903	0	0	0	0	0	0	14	0	0	0	0
		505905	0	0	0	0	0	0	5	0	0	0	17
		505909	0	0	0	0	0	0	0	0	0	0	22
		505932	0	0	11	0	0	0	10	0	0	0	0
		Total	147	223	167	15	5	106	245	330	588	1305	-
	Proportion (p)	475931	0.000	0.000	0.000	0.000	0.000	0.000	0.033	0.048	0.090	0.005	-
		475932	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.021	0.000	0.000	-
		475933	0.000	0.058	0.024	0.000	0.000	0.000	0.033	0.000	0.058	0.013	-
		475934	0.000	0.103	0.000	0.000	0.000	0.066	0.000	0.042	0.126	0.097	-
		476003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.024	0.000	0.000	-
		485931	0.000	0.027	0.228	0.800	0.000	0.066	0.024	0.039	0.073	0.024	-
		485932	0.082	0.081	0.120	0.000	0.000	0.132	0.078	0.036	0.155	0.263	-
		485933	0.095	0.000	0.000	0.000	0.000	0.189	0.000	0.000	0.000	0.021	-
		485934	0.000	0.000	0.000	0.000	0.000	0.000	0.049	0.000	0.010	0.004	-
		485935	0.279	0.090	0.090	0.000	0.000	0.208	0.065	0.130	0.126	0.099	-
		486001	0.000	0.054	0.066	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-
		495902	0.000	0.067	0.000	0.000	0.000	0.000	0.024	0.036	0.000	0.028	-
		495931	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.018	0.000	0.015	-
		495932	0.218	0.300	0.138	0.000	0.000	0.094	0.404	0.367	0.276	0.273	-
		495934	0.000	0.090	0.000	0.000	1.000	0.094	0.012	0.112	0.031	0.082	-
		495935	0.000	0.000	0.072	0.000	0.000	0.000	0.065	0.036	0.000	0.005	-
		495936	0.000	0.031	0.000	0.000	0.000	0.000	0.000	0.000	0.012	0.008	-
		495938	0.327	0.099	0.198	0.000	0.000	0.151	0.094	0.088	0.044	0.022	-
		496001	0.000	0.000	0.000	0.200	0.000	0.000	0.000	0.000	0.000	0.014	-
		505903	0.000	0.000	0.000	0.000	0.000	0.000	0.057	0.000	0.000	0.000	-
		505905	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.000	0.000	0.013	-
		505909	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.017	-
		505932	0.000	0.000	0.066	0.000	0.000	0.000	0.041	0.000	0.000	0.000	-

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Port	User Group	Parameter	Stat Area	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
		SE(p)	475931	-	-	-	-	-	-	0.011	0.012	0.012	0.002
			475932	-	-	-	-	-	-	-	0.008	-	-
			475933	-	0.016	0.012	-	-	-	0.011	-	0.010	0.003
			475934	-	0.020	-	-	-	0.024	-	0.011	0.014	0.008
			476003	-	-	-	-	-	-	-	0.008	-	-
			485931	-	0.011	0.033	0.107	-	0.024	0.010	0.011	0.011	0.004
			485932	0.023	0.018	0.025	-	-	0.033	0.017	0.010	0.015	0.012
			485933	0.024	-	-	-	-	0.038	-	-	-	0.004
			485934	-	-	-	-	-	-	0.014	-	0.004	0.002
			485935	0.037	0.019	0.022	-	-	0.040	0.016	0.019	0.014	0.008
			486001	-	0.015	0.019	-	-	-	-	-	-	-
			495902	-	0.017	-	-	-	-	0.010	0.010	-	0.005
			495931	-	-	-	-	-	-	-	0.007	-	0.003
			495932	0.034	0.031	0.027	-	-	0.029	0.031	0.027	0.018	0.012
			495934	-	0.019	-	-	0.000	0.029	0.007	0.017	0.007	0.008
			495935	-	-	0.020	-	-	-	0.016	0.010	-	0.002
			495936	-	0.012	-	-	-	-	-	-	0.004	0.002
			495938	0.039	0.020	0.031	-	-	0.035	0.019	0.016	0.008	0.004
			496001	-	-	-	0.107	-	-	-	-	-	0.003
			505903	-	-	-	-	-	-	0.015	-	-	-
			505905	-	-	-	-	-	-	0.009	-	-	0.003
			505909	-	-	-	-	-	-	-	-	-	0.004
			505932	-	-	0.019	-	-	-	0.013	-	-	-
Seward	Military	Reported Effort (angler-days)	475931	nd	nd	0	0	0	0	0	14	nd	nd
			485933	nd	nd	0	0	0	0	14	0	nd	nd
			485935	nd	nd	12	0	0	0	0	7	0	nd
			495931	nd	nd	0	0	0	0	0	0	15	nd
			495932	nd	nd	150	0	0	39	68	72	nd	nd
			495934	nd	nd	0	0	0	0	0	15	nd	nd
			495935	nd	nd	16	0	0	0	0	0	nd	nd
			495938	nd	nd	0	0	0	15	9	10	nd	nd
			505932	nd	nd	36	0	0	0	0	0	nd	nd
			Total	0	0	214	0	0	54	98	126	0	0
		Proportion (p)	475931	nd	nd	0.000	0.000	0.000	0.000	0.000	0.111	nd	nd
			485933	nd	nd	0.000	0.000	0.000	0.000	0.143	0.000	nd	nd
			485935	nd	nd	0.056	0.000	0.000	0.000	0.071	0.000	nd	nd
			495931	nd	nd	0.000	0.000	0.000	0.000	0.000	0.119	nd	nd
			495932	nd	nd	0.701	0.000	0.000	0.722	0.694	0.571	nd	nd
			495934	nd	nd	0.000	0.000	0.000	0.000	0.000	0.119	nd	nd
			495935	nd	nd	0.075	0.000	0.000	0.000	0.000	0.000	nd	nd
			495938	nd	nd	0.000	0.000	0.000	0.278	0.092	0.079	nd	nd
			505932	nd	nd	0.168	0.000	0.000	0.000	0.000	0.000	nd	nd
		SE(p)	475931	nd	nd	-	-	-	-	-	0.028	nd	nd
			485933	nd	nd	-	-	-	-	0.036	-	nd	nd
			485935	nd	nd	0.016	-	-	-	0.026	-	nd	nd
			495931	nd	nd	-	-	-	-	-	0.029	nd	nd
			495932	nd	nd	0.031	-	-	0.062	0.047	0.044	nd	nd
			495934	nd	nd	-	-	-	-	-	0.029	nd	nd
			495935	nd	nd	0.018	-	-	-	-	-	nd	nd
			495938	nd	nd	-	-	-	0.062	0.029	0.024	nd	nd
			505932	nd	nd	0.026	-	-	-	-	-	nd	nd
Seward	Private	Reported Effort (angler-days)	475931	0	0	0	0	0	0	0	0	4	0
			475933	0	0	4	0	0	0	0	0	0	0
			475934	0	0	0	0	0	0	0	0	4	0
			485932	0	8	3	0	0	6	4	3	6	6
			485933	16	4	5	0	0	0	12	0	20	9
			485935	36	17	21	0	0	13	0	4	4	11
			486001	0	0	14	0	0	0	0	0	0	0
			495931	0	0	0	0	0	0	2	2	0	4
			495932	49	73	45	4	5	20	108	21	115	247
			495934	10	0	0	0	0	5	10	0	0	6
			495935	0	0	10	0	0	4	0	0	0	4
			495936	0	0	0	0	0	0	2	0	1	3
			495937	1	0	0	0	0	0	0	0	0	0
			495938	69	63	117	17	9	50	66	32	98	77
			496001	0	2	0	0	0	0	0	0	2	0

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Port	User Group	Parameter	Stat Area	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
		496002		8	7	53	13	0	6	5	0	0	0
		505909		0	0	0	2	0	0	0	0	5	0
		Total		189	174	272	36	14	104	209	62	259	367
	Proportion (p)	475931	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.015	0.000	
		475933	0.000	0.000	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		475934	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.015	0.000	
		485932	0.000	0.046	0.011	0.000	0.000	0.058	0.019	0.048	0.023	0.016	
		485933	0.085	0.023	0.018	0.000	0.000	0.000	0.057	0.000	0.077	0.025	
		485935	0.190	0.098	0.077	0.000	0.000	0.125	0.000	0.065	0.015	0.030	
		486001	0.000	0.000	0.051	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		495931	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.032	0.000	0.011	
		495932	0.259	0.420	0.165	0.111	0.357	0.192	0.517	0.339	0.444	0.673	
		495934	0.053	0.000	0.000	0.000	0.000	0.048	0.048	0.000	0.000	0.016	
		495935	0.000	0.000	0.037	0.000	0.000	0.038	0.000	0.000	0.000	0.000	0.011
		495936	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.000	0.004	0.008	
		495937	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		495938	0.365	0.362	0.430	0.472	0.643	0.481	0.316	0.516	0.378	0.210	
		496001	0.000	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.000
		496002	0.042	0.040	0.195	0.361	0.000	0.058	0.024	0.000	0.000	0.000	0.000
		505909	0.000	0.000	0.000	0.056	0.000	0.000	0.000	0.000	0.019	0.000	
	SE(p)	475931	-	-	-	-	-	-	-	-	0.008	-	
		475933	-	-	0.007	-	-	-	-	-	-	-	
		475934	-	-	-	-	-	-	-	-	0.008	-	
		485932	-	0.016	0.006	-	-	0.023	0.010	0.027	0.009	0.007	
		485933	0.020	0.011	0.008	-	-	-	0.016	-	0.017	0.008	
		485935	0.029	0.023	0.016	-	-	0.033	-	0.031	0.008	0.009	
		486001	-	-	0.013	-	-	-	-	-	-	-	
		495931	-	-	-	-	-	-	0.007	0.023	-	0.005	
		495932	0.032	0.038	0.023	0.053	0.133	0.039	0.035	0.061	0.031	0.025	
		495934	0.016	-	-	-	-	0.021	0.015	-	-	0.007	
		495935	-	-	0.011	-	-	0.019	-	-	-	0.005	
		495936	-	-	-	-	-	-	0.007	-	0.004	0.005	
		495937	0.005	-	-	-	-	-	-	-	-	-	
		495938	0.035	0.037	0.030	0.084	0.133	0.049	0.032	0.064	0.030	0.021	
Valdez	Charter	Reported Effort (angler-days)	466001	-	-	-	-	-	-	-	-	0.005	
		466002	0	0	0	41	0	0	0	0	0	0	0
		466003	0	0	0	115	0	0	0	0	10	6	0
		466004	0	0	0	20	0	0	0	3	0	0	0
		466005	0	0	0	7	0	0	0	0	0	0	0
		466031	0	0	0	17	0	0	0	0	4	0	0
		466032	0	0	0	10	0	0	0	0	0	0	0
		466033	12	6	3	32	4	4	0	2	14	0	
		466100	2	0	0	4	0	0	0	4	6	3	0
		476001	0	0	0	6	0	0	0	0	0	0	0
		476002	0	0	0	21	0	0	0	0	0	0	0
		476003	0	0	9	9	5	0	0	0	0	0	0
		476004	0	0	0	6	0	0	0	0	0	0	0
		476008	0	0	0	14	0	0	0	0	0	0	0
		476031	0	0	0	16	0	0	0	0	0	0	0
		476032	0	0	0	19	0	3	0	0	0	0	0
		476033	0	0	0	14	0	0	0	0	16	0	0
		476034	0	0	0	14	0	0	0	0	0	0	0
		476035	0	0	0	0	6	4	0	0	0	3	0
		Total	14	6	12	365	15	11	7	38	26	0	
	Proportion (p)	466002	0.000	0.000	0.000	0.112	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		466003	0.000	0.000	0.000	0.315	0.000	0.000	0.000	0.263	0.231	0.000	
		466004	0.000	0.000	0.000	0.055	0.000	0.000	0.429	0.000	0.000	0.000	
		466005	0.000	0.000	0.000	0.019	0.000	0.000	0.000	0.000	0.000	0.000	
		466031	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.105	0.000	0.000	
		466032	0.000	0.000	0.000	0.027	0.000	0.000	0.000	0.000	0.000	0.000	
		466033	0.857	1.000	0.250	0.088	0.267	0.364	0.000	0.053	0.538	0.000	
		466100	0.143	0.000	0.000	0.011	0.000	0.000	0.571	0.158	0.115	0.000	
		476001	0.000	0.000	0.000	0.016	0.000	0.000	0.000	0.000	0.000	0.000	
		476002	0.000	0.000	0.000	0.058	0.000	0.000	0.000	0.000	0.000	0.000	

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Port	User Group	Parameter	Stat Area	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
		476003	0.000	0.000	0.750	0.025	0.333	0.000	0.000	0.000	0.000	0.000	0.000
		476004	0.000	0.000	0.000	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		476008	0.000	0.000	0.000	0.038	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		476031	0.000	0.000	0.000	0.044	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		476032	0.000	0.000	0.000	0.052	0.000	0.273	0.000	0.000	0.000	0.000	0.000
		476033	0.000	0.000	0.000	0.038	0.000	0.000	0.000	0.000	0.421	0.000	0.000
		476034	0.000	0.000	0.000	0.038	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		476035	0.000	0.000	0.000	0.400	0.364	0.000	0.000	0.115	0.000	0.000	0.000
	SE(p)	466002	-	-	-	0.017	-	-	-	-	-	-	-
		466003	-	-	-	0.024	-	-	-	0.072	0.084	-	-
		466004	-	-	-	0.012	-	-	0.202	-	-	-	-
		466005	-	-	-	0.007	-	-	-	-	-	-	-
		466031	-	-	-	0.011	-	-	-	0.050	-	-	-
		466032	-	-	-	0.009	-	-	-	-	-	-	-
		466033	0.097	0.000	0.131	0.015	0.118	0.152	-	0.037	0.100	-	-
		466100	0.097	-	-	0.005	-	-	0.202	0.060	0.064	-	-
		476001	-	-	-	0.007	-	-	-	-	-	-	-
		476002	-	-	-	0.012	-	-	-	-	-	-	-
		476003	-	-	0.131	0.008	0.126	-	-	-	-	-	-
		476004	-	-	-	0.007	-	-	-	-	-	-	-
		476008	-	-	-	0.010	-	-	-	-	-	-	-
		476031	-	-	-	0.011	-	-	-	-	-	-	-
		476032	-	-	-	0.012	-	0.141	-	-	-	-	-
		476033	-	-	-	0.010	-	-	-	0.081	-	-	-
		476034	-	-	-	0.010	-	-	-	-	-	-	-
		476035	-	-	-	0.131	0.152	-	-	0.064	-	-	-
Valdez	Private	Reported Effort (angler-days)	466002	0	0	0	0	0	0	0	0	4	0
		466003	0	0	0	24	0	10	0	0	0	12	0
		466031	4	0	0	3	0	0	5	0	0	0	0
		466032	7	0	0	21	0	0	14	26	6	0	0
		466033	0	3	18	36	24	6	5	58	86	18	0
		466100	8	0	8	40	27	34	30	36	101	17	0
		475932	0	0	0	2	0	0	0	0	0	0	0
		476007	0	0	0	6	0	0	0	0	0	0	0
		476031	0	0	0	0	0	0	0	0	4	28	0
		476032	2	0	0	2	0	0	0	0	0	0	0
		476033	0	0	0	9	0	0	0	0	0	0	0
		476034	0	0	0	12	0	6	0	0	0	8	0
		476035	0	0	0	0	0	2	0	3	3	0	0
		Total	21	3	26	155	51	58	54	127	248	35	
	Proportion (p)	466002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.016	0.000	
		466003	0.000	0.000	0.000	0.155	0.000	0.172	0.000	0.000	0.048	0.000	
		466031	0.190	0.000	0.000	0.019	0.000	0.000	0.093	0.000	0.000	0.000	
		466032	0.333	0.000	0.000	0.135	0.000	0.000	0.259	0.205	0.024	0.000	
		466033	0.000	1.000	0.692	0.232	0.471	0.103	0.093	0.457	0.347	0.514	
		466100	0.381	0.000	0.308	0.258	0.529	0.586	0.556	0.283	0.407	0.486	
		475932	0.000	0.000	0.000	0.013	0.000	0.000	0.000	0.000	0.000	0.000	
		476007	0.000	0.000	0.000	0.039	0.000	0.000	0.000	0.000	0.000	0.000	
		476031	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.031	0.113	0.000	
		476032	0.095	0.000	0.000	0.013	0.000	0.000	0.000	0.000	0.000	0.000	
		476033	0.000	0.000	0.000	0.058	0.000	0.000	0.000	0.000	0.000	0.000	
		476034	0.000	0.000	0.000	0.077	0.000	0.103	0.000	0.000	0.032	0.000	
		476035	0.000	0.000	0.000	0.000	0.034	0.000	0.024	0.012	0.000		
	SE(p)	466002	-	-	-	-	-	-	-	-	0.008	-	
		466003	-	-	-	0.029	-	0.050	-	-	0.014	-	
		466031	0.088	-	-	0.011	-	-	0.040	-	-	-	
		466032	0.105	-	-	0.028	-	-	0.060	0.036	0.010	-	
		466033	-	0.000	0.092	0.034	0.071	0.040	0.040	0.044	0.030	0.086	
		466100	0.109	-	0.092	0.035	0.071	0.065	0.068	0.040	0.031	0.086	
		475932	-	-	-	0.009	-	-	-	-	-	-	
		476007	-	-	-	0.016	-	-	-	-	-	-	
		476031	-	-	-	-	-	-	-	0.016	0.020	-	
		476032	0.066	-	-	0.009	-	-	-	-	-	-	
		476033	-	-	-	0.019	-	-	-	-	-	-	
		476034	-	-	-	0.022	-	0.040	-	-	0.011	-	
		476035	-	-	-	-	-	0.024	-	0.014	0.007	-	

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Port	User Group	Parameter	Stat Area	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Whittier	Charter	Reported Effort (angler-days)	466002	nd	nd	nd	nd	0	0	0	0	6	28
			466003	nd	nd	nd	nd	0	0	0	0	7	0
			466005	nd	nd	nd	nd	0	0	0	0	0	19
			476002	nd	nd	nd	nd	0	0	0	0	0	18
			476005	nd	nd	nd	nd	0	0	0	0	5	0
			476006	nd	nd	nd	nd	0	0	0	0	0	20
			476007	nd	nd	nd	nd	0	0	0	0	0	6
			476008	nd	nd	nd	nd	0	0	0	0	0	4
			476032	nd	nd	nd	nd	6	0	0	0	8	5
			476033	nd	nd	nd	nd	9	0	5	14	40	
			476034	nd	nd	nd	nd	0	0	0	0	0	5
			476035	nd	nd	nd	nd	0	0	0	0	4	0
			485932	nd	nd	nd	nd	0	0	0	0	0	7
			486001	nd	nd	nd	nd	0	0	0	0	0	6
			486003	nd	nd	nd	nd	0	0	5	0	0	
			486031	nd	nd	nd	nd	0	0	5	0	0	
			486033	nd	nd	nd	nd	15	0	19	16	17	
			486034	nd	nd	nd	nd	0	0	0	0	8	2
			486100	nd	nd	nd	nd	4	0	0	0	0	0
		Total							34	0	34	68	177
		Proportion (p)	466002	nd	nd	nd	nd	0.000	0.000	0.000	0.088	0.158	
			466003	nd	nd	nd	nd	0.000	0.000	0.000	0.103	0.000	
			466005	nd	nd	nd	nd	0.000	0.000	0.000	0.000	0.107	
			476002	nd	nd	nd	nd	0.000	0.000	0.000	0.000	0.102	
			476005	nd	nd	nd	nd	0.000	0.000	0.000	0.074	0.000	
			476006	nd	nd	nd	nd	0.000	0.000	0.000	0.000	0.113	
			476007	nd	nd	nd	nd	0.000	0.000	0.000	0.000	0.034	
			476008	nd	nd	nd	nd	0.000	0.000	0.000	0.000	0.023	
			476032	nd	nd	nd	nd	0.176	0.000	0.000	0.118	0.028	
			476033	nd	nd	nd	nd	0.265	0.000	0.147	0.206	0.226	
			476034	nd	nd	nd	nd	0.000	0.000	0.000	0.000	0.028	
			476035	nd	nd	nd	nd	0.000	0.000	0.000	0.059	0.000	
			485932	nd	nd	nd	nd	0.000	0.000	0.000	0.000	0.040	
			486001	nd	nd	nd	nd	0.000	0.000	0.000	0.000	0.034	
			486003	nd	nd	nd	nd	0.000	0.000	0.147	0.000	0.000	
			486031	nd	nd	nd	nd	0.000	0.000	0.147	0.000	0.000	
			486033	nd	nd	nd	nd	0.441	0.000	0.559	0.235	0.096	
			486034	nd	nd	nd	nd	0.000	0.000	0.000	0.118	0.011	
			486100	nd	nd	nd	nd	0.118	0.000	0.000	0.000	0.000	
		SE(p)	466002	nd	nd	nd	nd	-	-	-	0.035	0.028	
			466003	nd	nd	nd	nd	-	-	-	0.037	-	
			466005	nd	nd	nd	nd	-	-	-	-	0.023	
			476002	nd	nd	nd	nd	-	-	-	-	0.023	
			476005	nd	nd	nd	nd	-	-	-	0.032	-	
			476006	nd	nd	nd	nd	-	-	-	-	0.024	
			476007	nd	nd	nd	nd	-	-	-	-	0.014	
			476008	nd	nd	nd	nd	-	-	-	-	0.011	
			476032	nd	nd	nd	nd	0.066	-	-	0.039	0.012	
			476033	nd	nd	nd	nd	0.077	-	0.062	0.049	0.032	
			476034	nd	nd	nd	nd	-	-	-	-	0.012	
			476035	nd	nd	nd	nd	-	-	-	0.029	-	
			485932	nd	nd	nd	nd	-	-	-	-	0.015	
			486001	nd	nd	nd	nd	-	-	-	-	0.014	
			486003	nd	nd	nd	nd	-	-	0.062	-	-	
			486031	nd	nd	nd	nd	-	-	0.062	-	-	
			486033	nd	nd	nd	nd	0.086	-	0.086	0.052	0.022	
			486034	nd	nd	nd	nd	-	-	-	0.039	0.008	
			486100	nd	nd	nd	nd	0.056	-	-	-	-	
Whittier	Private	Reported Effort (angler-days)	476002	nd	nd	nd	nd	0	0	0	0	0	3
			476003	nd	nd	nd	nd	8	0	0	0	0	0
			476005	nd	nd	nd	nd	0	0	0	0	0	8
			476006	nd	nd	nd	nd	0	0	0	0	16	14
			476007	nd	nd	nd	nd	0	0	0	0	0	2
			476031	nd	nd	nd	nd	6	0	9	0	0	0
			476032	nd	nd	nd	nd	0	0	4	3	22	
			476033	nd	nd	nd	nd	6	0	0	4	48	
			476034	nd	nd	nd	nd	14	0	0	0	0	4

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Port	User Group	Parameter	Stat Area	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
		476035	nd	nd	nd	nd	nd	8	0	0	0	0	0
		476036	nd	nd	nd	nd	nd	0	0	0	0	12	0
		476102	nd	nd	nd	nd	nd	4	0	0	0	0	0
		486001	nd	nd	nd	nd	nd	0	0	0	0	28	12
		486003	nd	nd	nd	nd	nd	0	0	0	0	0	9
		486005	nd	nd	nd	nd	nd	0	0	0	0	0	20
		486031	nd	nd	nd	nd	nd	4	0	0	0	14	50
		486032	nd	nd	nd	nd	nd	0	0	0	0	8	3
		486033	nd	nd	nd	nd	nd	18	0	3	17	75	
		486034	nd	nd	nd	nd	nd	16	0	8	14	19	
		486100	nd	nd	nd	nd	nd	16	0	0	0	0	0
		Total						100	0	24	116	289	
	Proportion (p)	476002	nd	nd	nd	nd	nd	0.000	0.000	0.000	0.000	0.010	
		476003	nd	nd	nd	nd	nd	0.080	0.000	0.000	0.000	0.000	
		476005	nd	nd	nd	nd	nd	0.000	0.000	0.000	0.000	0.028	
		476006	nd	nd	nd	nd	nd	0.000	0.000	0.000	0.000	0.138	0.048
		476007	nd	nd	nd	nd	nd	0.000	0.000	0.000	0.000	0.007	
		476031	nd	nd	nd	nd	nd	0.060	0.000	0.375	0.000	0.000	
		476032	nd	nd	nd	nd	nd	0.000	0.000	0.167	0.026	0.076	
		476033	nd	nd	nd	nd	nd	0.060	0.000	0.000	0.034	0.166	
		476034	nd	nd	nd	nd	nd	0.140	0.000	0.000	0.000	0.014	
		476035	nd	nd	nd	nd	nd	0.080	0.000	0.000	0.000	0.000	
		476036	nd	nd	nd	nd	nd	0.000	0.000	0.000	0.103	0.000	
		476102	nd	nd	nd	nd	nd	0.040	0.000	0.000	0.000	0.000	
		486001	nd	nd	nd	nd	nd	0.000	0.000	0.000	0.241	0.042	
		486003	nd	nd	nd	nd	nd	0.000	0.000	0.000	0.000	0.031	
		486005	nd	nd	nd	nd	nd	0.000	0.000	0.000	0.000	0.069	
		486031	nd	nd	nd	nd	nd	0.040	0.000	0.000	0.121	0.173	
		486032	nd	nd	nd	nd	nd	0.000	0.000	0.000	0.069	0.010	
		486033	nd	nd	nd	nd	nd	0.180	0.000	0.125	0.147	0.260	
		486034	nd	nd	nd	nd	nd	0.160	0.000	0.333	0.121	0.066	
		486100	nd	nd	nd	nd	nd	0.160	0.000	0.000	0.000	0.000	
	SE(p)	476002	nd	nd	nd	nd	nd	-	-	-	-	0.006	
		476003	nd	nd	nd	nd	nd	0.027	-	-	-	-	
		476005	nd	nd	nd	nd	nd	-	-	-	-	0.010	
		476006	nd	nd	nd	nd	nd	-	-	-	0.032	0.013	
		476007	nd	nd	nd	nd	nd	-	-	-	-	0.005	
		476031	nd	nd	nd	nd	nd	0.024	-	0.101	-	-	
		476032	nd	nd	nd	nd	nd	-	-	0.078	0.015	0.016	
		476033	nd	nd	nd	nd	nd	0.024	-	-	0.017	0.022	
		476034	nd	nd	nd	nd	nd	0.035	-	-	-	0.007	
		476035	nd	nd	nd	nd	nd	0.027	-	-	-	-	
		476036	nd	nd	nd	nd	nd	-	-	-	0.028	-	
		476102	nd	nd	nd	nd	nd	0.020	-	-	-	-	
		486001	nd	nd	nd	nd	nd	-	-	-	0.040	0.012	
		486003	nd	nd	nd	nd	nd	-	-	-	-	0.010	
		486005	nd	nd	nd	nd	nd	-	-	-	-	0.015	
		486031	nd	nd	nd	nd	nd	0.020	-	-	0.030	0.022	
		486032	nd	nd	nd	nd	nd	-	-	-	0.024	0.006	
		486033	nd	nd	nd	nd	nd	0.039	-	0.069	0.033	0.026	
		486034	nd	nd	nd	nd	nd	0.037	-	0.098	0.030	0.015	
		486100	nd	nd	nd	nd	nd	0.037	-	-	-	-	
Cordova	Charter	Reported Effort (angler-days)	456003	nd	nd	nd	nd	nd	6	nd	nd	nd	
			456031	nd	nd	nd	nd	nd	11	nd	nd	nd	
			466031	nd	nd	nd	nd	nd	33	nd	nd	nd	
		Total						50					
	Proportion (p)	456003	nd	nd	nd	nd	nd	0.120	nd	nd	nd	nd	
		456031	nd	nd	nd	nd	nd	0.220	nd	nd	nd	nd	
		466031	nd	nd	nd	nd	nd	0.660	nd	nd	nd	nd	
	SE(p)	456003	nd	nd	nd	nd	nd	0.046	nd	nd	nd	nd	
		456031	nd	nd	nd	nd	nd	0.059	nd	nd	nd	nd	
		466031	nd	nd	nd	nd	nd	0.068	nd	nd	nd	nd	

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Port	User Group	Parameter	Stat Area	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Cordova	Private	Reported Effort (angler-days)	456031	nd	nd	nd	nd	nd	nd	20	nd	nd	nd
			456032	nd	nd	nd	nd	nd	nd	11	nd	nd	nd
			466031	nd	nd	nd	nd	nd	nd	2	nd	nd	nd
			Total							33			
		Proportion (p)	456031	nd	nd	nd	nd	nd	nd	0.606	nd	nd	nd
			456032	nd	nd	nd	nd	nd	nd	0.333	nd	nd	nd
			466031	nd	nd	nd	nd	nd	nd	0.061	nd	nd	nd
		SE(p)	456031	nd	nd	nd	nd	nd	nd	0.086	nd	nd	nd
			456032	nd	nd	nd	nd	nd	nd	0.083	nd	nd	nd
			466031	nd	nd	nd	nd	nd	nd	0.042	nd	nd	nd

nd - indicates no data collected

Appendix B5.-Estimated distribution of recreational lingcod harvest at Kodiak, Homer, Seward, Valdez, and Whittier, 1993-2002.

Port	User Group	Parameter	Stat Area	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Kodiak	Charter	Reported Effort (angler-days)	515802	0	3	0	0	0	0	0	0	0	0
			525701	0	0	0	4	0	4	6	15	5	1
			525702	0	0	0	0	0	0	8	0	10	0
			525703	0	0	0	0	1	0	0	0	0	0
			525731	0	0	4	4	0	9	0	2	0	17
			525732	0	5	0	0	0	4	0	0	0	0
			525733	10	40	25	69	29	109	59	70	110	81
			525805	2	0	2	0	0	0	0	0	0	0
			525806	0	0	0	0	0	0	0	4	0	0
			525807	0	0	0	0	0	0	0	0	0	2
			Total	12	48	31	77	30	126	73	91	125	101
		Proportion (p)	515802	0.000	0.063	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			525701	0.000	0.000	0.000	0.052	0.000	0.032	0.082	0.165	0.040	0.010
			525702	0.000	0.000	0.000	0.000	0.000	0.000	0.110	0.000	0.080	0.000
			525703	0.000	0.000	0.000	0.000	0.033	0.000	0.000	0.000	0.000	0.000
			525731	0.000	0.000	0.129	0.052	0.000	0.071	0.000	0.022	0.000	0.168
			525732	0.000	0.104	0.000	0.000	0.000	0.032	0.000	0.000	0.000	0.000
			525733	0.833	0.833	0.806	0.896	0.967	0.865	0.808	0.769	0.880	0.802
			525805	0.167	0.000	0.065	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			525806	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.044	0.000	0.000
			525807	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.020
		SE(p)	515802	-	0.035	-	-	-	-	-	-	-	-
			525701	-	-	-	0.025	-	0.016	0.032	0.039	0.018	0.010
			525702	-	-	-	-	-	-	0.037	-	0.024	-
			525703	-	-	-	-	0.033	-	-	-	-	-
			525731	-	-	0.061	0.025	-	0.023	-	0.015	-	0.037
			525732	-	0.045	-	-	-	0.016	-	-	-	-
			525733	0.112	0.054	0.072	0.035	0.033	0.031	0.046	0.044	0.029	0.040
			525805	0.112	-	0.045	-	-	-	-	-	-	-
			525806	-	-	-	-	-	-	-	0.022	-	-
			525807	-	-	-	-	-	-	-	-	-	0.014
Kodiak	Private	Reported Effort (angler-days)	515801	0	0	0	0	1	0	0	0	0	0
			525701	0	0	0	0	0	0	4	7	0	0
			525731	1	0	1	1	4	9	1	0	3	6
			525732	1	8	1	0	0	0	4	16	0	0
			525733	9	29	45	16	12	22	13	11	23	22
			525807	0	0	0	0	0	0	0	4	0	0
			535803	0	0	0	0	0	0	1	0	0	0
			Total	11	37	47	17	17	31	23	38	26	28
		Proportion (p)	515801	0.000	0.000	0.000	0.000	0.059	0.000	0.000	0.000	0.000	0.000
			525701	0.000	0.000	0.000	0.000	0.000	0.000	0.174	0.184	0.000	0.000
			525731	0.091	0.000	0.021	0.059	0.235	0.290	0.043	0.000	0.115	0.214
			525732	0.091	0.216	0.021	0.000	0.000	0.000	0.174	0.421	0.000	0.000
			525733	0.818	0.784	0.957	0.941	0.706	0.710	0.565	0.289	0.885	0.786
			525807	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.105	0.000	0.000
			535803	0.000	0.000	0.000	0.000	0.000	0.000	0.043	0.000	0.000	0.000
		SE(p)	515801	-	-	-	-	0.059	-	-	-	-	-
			525701	-	-	-	-	-	-	0.081	0.064	-	-
			525731	0.091	-	0.021	0.059	0.106	0.083	0.043	-	0.064	0.079
			525732	0.091	0.069	0.021	-	-	-	0.081	0.081	-	-
			525733	0.122	0.069	0.030	0.059	0.114	0.083	0.106	0.075	0.064	0.079
			525807	-	-	-	-	-	-	-	0.050	-	-
			535803	-	-	-	-	-	-	0.043	-	-	-
Homer	Charter	Reported Effort (angler-days)	515831	0	0	0	0	0	0	0	0	0	9
			515832	0	0	0	0	0	1	0	3	0	0
			515902	0	0	0	0	0	0	0	8	0	0
			515903	0	3	0	4	8	23	14	79	26	10
			515904	0	0	0	0	0	1	0	1	0	3
			515905	1	1	1	0	2	2	1	3	14	27
			515906	0	0	0	0	0	1	1	0	0	0
			515933	0	0	0	0	0	0	0	2	0	0
			515936	0	0	0	0	0	0	0	1	0	0
			515937	0	0	0	0	1	0	0	0	0	0

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Port	User Group Parameter	Stat Area	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	
		525834	0	0	0	0	0	0	0	0	3	0	
		525836	0	4	0	0	1	1	2	0	5	0	
		525837	0	0	0	0	0	4	1	0	0	3	
		525901	0	0	0	0	0	0	0	0	0	6	
		525902	0	0	0	0	0	0	0	17	4	0	
		525931	0	0	0	0	0	0	0	0	1	0	
		Total	1	8	1	4	12	33	19	114	53	58	
	Proportion (p)	515831	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.155	
		515832	0.000	0.000	0.000	0.000	0.000	0.030	0.000	0.026	0.000	0.000	
		515902	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.070	0.000	0.000	
		515903	0.000	0.375	0.000	1.000	0.667	0.697	0.737	0.693	0.491	0.172	
		515904	0.000	0.000	0.000	0.000	0.000	0.030	0.000	0.009	0.000	0.052	
		515905	1.000	0.125	1.000	0.000	0.167	0.061	0.053	0.026	0.264	0.466	
		515906	0.000	0.000	0.000	0.000	0.000	0.030	0.053	0.000	0.000	0.000	
		515933	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.018	0.000	0.000	
		515936	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.000	0.000	
		515937	0.000	0.000	0.000	0.000	0.083	0.000	0.000	0.000	0.000	0.000	
		525834	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.057	0.000	
		525836	0.000	0.500	0.000	0.000	0.083	0.030	0.105	0.000	0.094	0.000	
		525837	0.000	0.000	0.000	0.000	0.000	0.121	0.053	0.000	0.000	0.052	
		525901	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.103	
		525902	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.149	0.075	0.000	
		525931	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.019	0.000	
	SE(p)	515831	-	-	-	-	-	-	-	-	-	0.048	
		515832	-	-	-	-	-	0.030	-	0.015	-	-	
		515902	-	-	-	-	-	-	-	0.024	-	-	
		515903	-	0.183	-	0.000	0.142	0.081	0.104	0.043	0.069	0.050	
		515904	-	-	-	-	-	0.030	-	0.009	-	0.029	
		515905	0.000	0.125	0.000	-	0.112	0.042	0.053	0.015	0.061	0.066	
		515906	-	-	-	-	-	0.030	0.053	-	-	-	
		515933	-	-	-	-	-	-	-	0.012	-	-	
		515936	-	-	-	-	-	-	-	0.009	-	-	
		515937	-	-	-	-	0.083	-	-	-	-	-	
		525834	-	-	-	-	-	-	-	-	0.032	-	
		525836	-	0.189	-	-	0.083	0.030	0.072	-	0.041	-	
		525837	-	-	-	-	-	0.058	0.053	-	-	0.029	
		525901	-	-	-	-	-	-	-	-	-	0.040	
		525902	-	-	-	-	-	-	-	0.034	0.037	-	
		525931	-	-	-	-	-	-	-	-	0.019	-	
Homer	Private	Reported Effort (angler-days)	515901	0	0	1	0	0	0	0	0	0	
		515903	0	0	0	0	0	0	0	0	9	0	
		515904	0	0	0	0	0	0	4	0	0	0	
		515906	0	0	0	0	0	0	0	0	0	1	
		525902	0	0	0	1	0	0	0	0	0	0	
		Total	0	0	1	1	0	0	4	0	9	1	
	Proportion (p)	515901	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		515903	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	
		515904	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000	
		515906	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000	
	SE(p)	515901	-	-	0.000	-	-	-	-	-	-	-	
		515903	-	-	-	-	-	-	-	-	0.000	-	
		515904	-	-	-	-	-	-	0.000	-	-	-	
		515906	-	-	-	-	-	-	-	-	0.000	-	
		525902	-	-	-	0.000	-	-	-	-	-	-	
Seward	Charter	Reported Effort (angler-days)	475931	0	0	12	0	0	9	9	18	16	3
		475932	0	8	0	0	0	0	0	2	1	2	
		475933	0	22	11	1	1	1	2	1	14	9	
		475934	6	55	4	0	2	0	7	23	23	38	
		485931	0	13	7	1	0	5	10	36	30	15	
		485932	13	8	3	3	9	3	41	17	18	41	
		485933	1	0	0	0	0	0	3	3	1	2	
		485934	0	0	0	0	0	0	1	0	0	1	

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Port	User Group Parameter	Stat Area	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	485935	16	12	5	0	0	3	7	13	13	21	
	486001	0	0	0	0	0	0	1	0	1	0	
	486002	0	0	0	0	0	0	1	0	0	0	
	495901	0	0	0	0	0	0	0	3	0	0	
	495902	0	17	0	0	0	0	6	10	0	28	
	495931	0	0	0	0	1	2	1	27	0	4	
	495932	17	34	14	2	1	8	40	94	83	95	
	495933	0	0	0	0	0	0	0	4	0	0	
	495934	1	4	1	0	4	27	4	69	5	29	
	495935	0	0	9	0	0	0	6	7	0	1	
	495936	0	4	0	0	0	0	5	0	0	5	
	495938	2	0	6	2	0	5	3	10	5	5	
	495939	0	1	0	0	0	0	1	0	3	1	
	505901	0	0	0	0	0	0	3	3	0	0	
	505903	0	0	0	0	0	0	7	0	0	0	
	505905	0	0	0	0	0	0	2	0	6	0	
	505906	0	0	0	0	0	0	0	1	0	0	
	505907	0	0	0	0	0	0	0	15	0	4	
	505909	0	23	0	0	0	0	8	3	0	0	
	505931	0	0	0	0	0	0	1	0	0	0	
	505932	0	0	23	0	0	1	13	15	0	0	
	Total		56	201	95	9	18	64	182	374	219	304
	Proportion (p)											
	475931	0.000	0.000	0.126	0.000	0.000	0.141	0.049	0.048	0.073	0.010	
	475932	0.000	0.040	0.000	0.000	0.000	0.000	0.000	0.005	0.005	0.007	
	475933	0.000	0.109	0.116	0.111	0.056	0.016	0.011	0.003	0.064	0.030	
	475934	0.107	0.274	0.042	0.000	0.111	0.000	0.038	0.061	0.105	0.125	
	485931	0.000	0.065	0.074	0.111	0.000	0.078	0.055	0.096	0.137	0.049	
	485932	0.232	0.040	0.032	0.333	0.500	0.047	0.225	0.045	0.082	0.135	
	485933	0.018	0.000	0.000	0.000	0.000	0.000	0.016	0.008	0.005	0.007	
	485934	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.000	0.003	
	485935	0.286	0.060	0.053	0.000	0.000	0.047	0.038	0.035	0.059	0.069	
	486001	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.005	0.000	
	486002	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.000	0.000	
	495901	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.000	0.000	
	495902	0.000	0.085	0.000	0.000	0.000	0.000	0.033	0.027	0.000	0.092	
	495931	0.000	0.000	0.000	0.000	0.056	0.031	0.005	0.072	0.000	0.013	
	495932	0.304	0.169	0.147	0.222	0.056	0.125	0.220	0.251	0.379	0.313	
	495933	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.011	0.000	0.000	
	495934	0.018	0.020	0.011	0.000	0.222	0.422	0.022	0.184	0.023	0.095	
	495935	0.000	0.000	0.095	0.000	0.000	0.000	0.033	0.019	0.000	0.003	
	495936	0.000	0.020	0.000	0.000	0.000	0.000	0.027	0.000	0.000	0.016	
	495938	0.036	0.000	0.063	0.222	0.000	0.078	0.016	0.027	0.023	0.016	
	495939	0.000	0.005	0.000	0.000	0.000	0.000	0.005	0.000	0.014	0.003	
	505901	0.000	0.000	0.000	0.000	0.000	0.000	0.016	0.008	0.000	0.000	
	505903	0.000	0.000	0.000	0.000	0.000	0.000	0.038	0.000	0.000	0.000	
	505905	0.000	0.000	0.000	0.000	0.000	0.000	0.011	0.000	0.027	0.000	
	505906	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	
	505907	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.040	0.000	0.013	
	505909	0.000	0.114	0.000	0.000	0.000	0.000	0.044	0.008	0.000	0.000	
	505931	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.000	0.000	
	505932	0.000	0.000	0.242	0.000	0.000	0.016	0.071	0.040	0.000	0.000	
	SE(p)											
	475931	-	-	0.034	-	-	0.044	0.016	0.011	0.018	0.006	
	475932	-	0.014	-	-	-	-	-	0.004	0.005	0.005	
	475933	-	0.022	0.033	0.111	0.056	0.016	0.008	0.003	0.017	0.010	
	475934	0.042	0.032	0.021	-	0.076	-	0.014	0.012	0.021	0.019	
	485931	-	0.017	0.027	0.111	-	0.034	0.017	0.015	0.023	0.012	
	485932	0.057	0.014	0.018	0.167	0.121	0.027	0.031	0.011	0.019	0.020	
	485933	0.018	-	-	-	-	-	0.009	0.005	0.005	0.005	
	485934	-	-	-	-	-	-	0.005	-	-	0.003	
	485935	0.061	0.017	0.023	-	-	0.027	0.014	0.009	0.016	0.015	
	486001	-	-	-	-	-	-	0.005	-	0.005	-	
	486002	-	-	-	-	-	-	0.005	-	-	-	
	495901	-	-	-	-	-	-	-	0.005	-	-	
	495902	-	0.020	-	-	-	-	0.013	0.008	-	0.017	
	495931	-	-	-	-	0.056	0.022	0.005	0.013	-	0.007	
	495932	0.062	0.027	0.037	0.147	0.056	0.042	0.031	0.022	0.033	0.027	
	495933	-	-	-	-	-	-	-	0.005	-	-	
	495934	0.018	0.010	0.011	-	0.101	0.062	0.011	0.020	0.010	0.017	

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Port	User Group Parameter	Stat Area	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	
		495935	-	-	0.030	-	-	-	0.013	0.007	-	0.003	
		495936	-	0.010	-	-	-	-	0.012	-	-	0.007	
		495938	0.025	-	0.025	0.147	-	0.034	0.009	0.008	0.010	0.007	
		495939	-	0.005	-	-	-	-	0.005	-	0.008	0.003	
		505901	-	-	-	-	-	-	0.009	0.005	-	-	
		505903	-	-	-	-	-	-	0.014	-	-	-	
		505905	-	-	-	-	-	-	0.008	-	0.011	-	
		505906	-	-	-	-	-	-	-	0.003	-	-	
		505907	-	-	-	-	-	-	-	0.010	-	0.007	
		505909	-	0.023	-	-	-	-	0.015	0.005	-	-	
		505931	-	-	-	-	-	-	0.005	-	-	-	
		505932	-	-	0.044	-	-	0.016	0.019	0.010	-	-	
Seward	Military	Reported Effort (angler-days)	475931	nd	nd	0	0	0	0	0	1	nd	nd
			475933	nd	nd	0	0	0	0	1	0	nd	nd
			475934	nd	nd	0	0	0	0	0	18	nd	nd
			485931	nd	nd	0	0	0	0	3	0	nd	nd
			485933	nd	nd	0	0	0	0	1	0	nd	nd
			485934	nd	nd	0	0	0	0	1	0	nd	nd
			485935	nd	nd	4	1	1	3	0	0	nd	nd
			495902	nd	nd	0	7	0	0	0	0	nd	nd
			495931	nd	nd	0	0	0	0	0	1	nd	nd
			495932	nd	nd	36	21	7	22	8	6	nd	nd
			495934	nd	nd	2	0	1	0	3	0	nd	nd
			495935	nd	nd	0	1	0	0	0	0	nd	nd
			495936	nd	nd	0	0	2	0	0	0	nd	nd
			505932	nd	nd	3	2	0	0	0	0	nd	nd
		Total		0	0	45	32	11	25	17	26	0	0
		Proportion (p)	475931	nd	nd	0.000	0.000	0.000	0.000	0.000	0.038	nd	nd
			475933	nd	nd	0.000	0.000	0.000	0.000	0.059	0.000	nd	nd
			475934	nd	nd	0.000	0.000	0.000	0.000	0.000	0.692	nd	nd
			485931	nd	nd	0.000	0.000	0.000	0.000	0.176	0.000	nd	nd
			485933	nd	nd	0.000	0.000	0.000	0.000	0.059	0.000	nd	nd
			485934	nd	nd	0.000	0.000	0.000	0.000	0.059	0.000	nd	nd
			485935	nd	nd	0.089	0.031	0.091	0.120	0.000	0.000	nd	nd
			495902	nd	nd	0.000	0.219	0.000	0.000	0.000	0.000	nd	nd
			495931	nd	nd	0.000	0.000	0.000	0.000	0.000	0.038	nd	nd
			495932	nd	nd	0.800	0.656	0.636	0.880	0.471	0.231	nd	nd
			495934	nd	nd	0.044	0.000	0.091	0.000	0.176	0.000	nd	nd
			495935	nd	nd	0.000	0.031	0.000	0.000	0.000	0.000	nd	nd
			495936	nd	nd	0.000	0.000	0.182	0.000	0.000	0.000	nd	nd
			505932	nd	nd	0.067	0.063	0.000	0.000	0.000	0.000	nd	nd
		SE(p)	475931	nd	nd	-	-	-	-	-	0.038	nd	nd
			475933	nd	nd	-	-	-	-	0.059	-	nd	nd
			475934	nd	nd	-	-	-	-	-	0.092	nd	nd
			485931	nd	nd	-	-	-	-	0.095	-	nd	nd
			485933	nd	nd	-	-	-	-	0.059	-	nd	nd
			485934	nd	nd	-	-	-	-	0.059	-	nd	nd
			485935	nd	nd	0.043	0.031	0.091	0.066	-	-	nd	nd
			495902	nd	nd	-	0.074	-	-	-	-	nd	nd
			495931	nd	nd	-	-	-	-	-	0.038	nd	nd
			495932	nd	nd	0.060	0.085	0.152	0.066	0.125	0.084	nd	nd
			495934	nd	nd	0.031	-	0.091	-	0.095	-	nd	nd
			495935	nd	nd	-	0.031	-	-	-	-	nd	nd
			495936	nd	nd	-	-	0.122	-	-	-	nd	nd
			505932	nd	nd	0.038	0.043	-	-	-	-	nd	nd
Seward	Private	Reported Effort (angler-days)	475931	0	0	0	0	0	0	0	3	8	0
			475932	0	0	0	0	0	0	0	0	0	3
			475934	0	0	1	0	0	0	1	1	0	0
			485932	0	1	4	0	0	0	3	0	2	0
			485933	6	1	0	0	0	1	0	2	6	4
			485935	13	3	3	0	1	1	0	1	2	0
			495931	0	0	0	0	0	0	0	2	0	0
			495932	25	21	10	0	2	11	33	15	34	23
			495934	5	0	0	2	0	2	3	1	0	3
			495935	2	0	4	0	0	1	0	0	0	0
			495936	0	0	0	0	0	0	0	0	0	1

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Port	User Group Parameter	Stat Area	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
		495937	1	0	0	0	0	0	0	0	0	0
		495938	20	10	7	5	2	5	12	6	12	2
		505909	0	0	0	3	0	0	0	0	5	0
		505934	0	0	0	0	1	0	0	0	0	0
		Total	72	36	29	10	6	21	52	31	69	36
	Proportion (p)	475931	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.097	0.116	0.000
		475932	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.083
		475934	0.000	0.000	0.034	0.000	0.000	0.000	0.019	0.032	0.000	0.000
		485932	0.000	0.028	0.138	0.000	0.000	0.000	0.058	0.000	0.029	0.000
		485933	0.083	0.028	0.000	0.000	0.000	0.048	0.000	0.065	0.087	0.111
		485935	0.181	0.083	0.103	0.000	0.167	0.048	0.000	0.032	0.029	0.000
		495931	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.065	0.000	0.000
		495932	0.347	0.583	0.345	0.000	0.333	0.524	0.635	0.484	0.493	0.639
		495934	0.069	0.000	0.000	0.200	0.000	0.095	0.058	0.032	0.000	0.083
		495935	0.028	0.000	0.138	0.000	0.000	0.048	0.000	0.000	0.000	0.000
		495936	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.028
		495937	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		495938	0.278	0.278	0.241	0.500	0.333	0.238	0.231	0.194	0.174	0.056
		505909	0.000	0.000	0.000	0.300	0.000	0.000	0.000	0.000	0.072	0.000
		505934	0.000	0.000	0.000	0.000	0.167	0.000	0.000	0.000	0.000	0.000
	SE(p)	475931	-	-	-	-	-	-	0.054	0.039	-	
		475932	-	-	-	-	-	-	-	-	0.047	
		475934	-	-	0.034	-	-	0.019	0.032	-	-	
		485932	-	0.028	0.065	-	-	0.033	-	0.020	-	
		485933	0.033	0.028	-	-	-	0.048	-	0.045	0.034	0.053
		485935	0.046	0.047	0.058	-	0.167	0.048	-	0.032	0.020	-
		495931	-	-	-	-	-	-	0.045	-	-	
		495932	0.057	0.083	0.090	-	0.211	0.112	0.067	0.091	0.061	0.081
		495934	0.030	-	-	0.133	-	0.066	0.033	0.032	-	0.047
		495935	0.020	-	0.065	-	-	0.048	-	-	-	-
		495936	-	-	-	-	-	-	-	-	0.028	-
		495937	0.014	-	-	-	-	-	-	-	-	-
		495938	0.053	0.076	0.081	0.167	0.211	0.095	0.059	0.072	0.046	0.039
		505909	-	-	-	0.153	-	-	-	-	0.031	-
		505934	-	-	-	-	0.167	-	-	-	-	-
Valdez	Charter	Reported Effort (angler-days)	465931	0	0	0	0	0	0	0	1	0
		465932	0	0	0	0	0	8	10	36	21	62
		466001	2	0	0	0	6	17	0	0	0	2
		466002	14	1	40	61	52	28	41	44	36	35
		466003	3	2	0	10	5	0	12	7	15	13
		466004	2	25	24	7	27	21	48	20	69	14
		466005	4	4	12	24	23	18	3	0	0	0
		466031	0	0	0	0	4	0	6	5	1	0
		466032	0	0	0	1	0	0	1	0	0	0
		466033	0	0	0	1	4	0	1	0	2	2
		475932	0	0	0	1	7	10	10	19	22	26
		475933	0	0	0	0	0	9	0	0	0	0
		476001	0	0	0	4	6	0	0	0	8	3
		476002	7	4	7	15	19	33	3	16	18	3
		476003	0	0	2	0	2	0	2	3	5	0
		476004	0	0	0	1	0	0	0	0	0	0
		476005	0	1	0	3	0	0	0	0	0	0
		476007	6	1	5	0	9	4	0	0	0	0
		476008	3	1	0	0	3	0	6	3	0	4
		476009	0	0	0	0	0	0	2	0	3	0
		476032	0	0	1	0	1	0	0	0	0	0
		476035	0	3	0	0	5	0	0	0	0	0
		Total	41	42	91	128	173	148	145	153	201	164
	Proportion (p)	465931	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.000
		465932	0.000	0.000	0.000	0.000	0.000	0.054	0.069	0.235	0.104	0.378
		466001	0.049	0.000	0.000	0.000	0.035	0.115	0.000	0.000	0.000	0.012
		466002	0.341	0.024	0.440	0.477	0.301	0.189	0.283	0.288	0.179	0.213
		466003	0.073	0.048	0.000	0.078	0.029	0.000	0.083	0.046	0.075	0.079
		466004	0.049	0.595	0.264	0.055	0.156	0.142	0.331	0.131	0.343	0.085
		466005	0.098	0.095	0.132	0.188	0.133	0.122	0.021	0.000	0.000	0.000

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Port	User Group Parameter	Stat Area	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
		466031	0.000	0.000	0.000	0.000	0.023	0.000	0.041	0.033	0.005	0.000
		466032	0.000	0.000	0.000	0.008	0.000	0.000	0.007	0.000	0.000	0.000
		466033	0.000	0.000	0.000	0.008	0.023	0.000	0.007	0.000	0.010	0.012
		475932	0.000	0.000	0.000	0.008	0.040	0.068	0.069	0.124	0.109	0.159
		475933	0.000	0.000	0.000	0.000	0.000	0.061	0.000	0.000	0.000	0.000
		476001	0.000	0.000	0.000	0.031	0.035	0.000	0.000	0.000	0.040	0.018
		476002	0.171	0.095	0.077	0.117	0.110	0.223	0.021	0.105	0.090	0.018
		476003	0.000	0.000	0.022	0.000	0.012	0.000	0.014	0.020	0.025	0.000
		476004	0.000	0.000	0.000	0.008	0.000	0.000	0.000	0.000	0.000	0.000
		476005	0.000	0.024	0.000	0.023	0.000	0.000	0.000	0.000	0.000	0.000
		476007	0.146	0.024	0.055	0.000	0.052	0.027	0.000	0.000	0.000	0.000
		476008	0.073	0.024	0.000	0.000	0.017	0.000	0.041	0.020	0.000	0.024
		476009	0.000	0.000	0.000	0.000	0.000	0.000	0.014	0.000	0.015	0.000
		476032	0.000	0.000	0.011	0.000	0.006	0.000	0.000	0.000	0.000	0.000
		476035	0.000	0.071	0.000	0.000	0.029	0.000	0.000	0.000	0.000	0.000
	SE(p)	465931	-	-	-	-	-	-	-	0.005	-	
		465932	-	-	-	-	-	0.019	0.021	0.034	0.022	0.038
		466001	0.034	-	-	-	0.014	0.026	-	-	-	0.009
		466002	0.075	0.024	0.052	0.044	0.035	0.032	0.038	0.037	0.027	0.032
		466003	0.041	0.033	-	0.024	0.013	-	0.023	0.017	0.019	0.021
		466004	0.034	0.077	0.046	0.020	0.028	0.029	0.039	0.027	0.034	0.022
		466005	0.047	0.046	0.036	0.035	0.026	0.027	0.012	-	-	-
		466031	-	-	-	-	0.011	-	0.017	0.014	0.005	-
		466032	-	-	-	0.008	-	-	0.007	-	-	-
		466033	-	-	-	0.008	0.011	-	0.007	-	0.007	0.009
		475932	-	-	-	0.008	0.015	0.021	0.021	0.027	0.022	0.029
		475933	-	-	-	-	-	0.020	-	-	-	-
		476001	-	-	-	0.015	0.014	-	-	-	0.014	0.010
		476002	0.059	0.046	0.028	0.029	0.024	0.034	0.012	0.025	0.020	0.010
		476003	-	-	0.015	-	0.008	-	0.010	0.011	0.011	-
		476004	-	-	-	0.008	-	-	-	-	-	-
		476005	-	0.024	-	0.013	-	-	-	-	-	-
		476007	0.056	0.024	0.024	-	0.017	0.013	-	-	-	-
		476008	0.041	0.024	-	-	0.010	-	0.017	0.011	-	0.012
		476009	-	-	-	-	-	-	0.010	-	0.009	-
		476032	-	-	0.011	-	0.006	-	-	-	-	-
		476035	-	0.040	-	-	0.013	-	-	-	-	-
Valdez	Private	Reported Effort (angler-days)	465932	0	0	0	0	0	0	0	1	1
		466001	1	0	0	0	3	0	0	0	0	0
		466002	0	0	7	0	0	2	1	0	3	2
		466003	0	0	0	0	2	0	6	0	0	3
		466004	0	2	1	0	12	2	0	0	0	4
		466005	0	0	0	0	2	0	0	0	2	0
		466031	0	0	0	0	0	0	0	2	1	0
		466032	2	0	0	0	0	0	0	0	1	1
		466033	0	0	0	0	0	0	0	10	2	7
		466100	0	0	0	0	3	0	0	0	1	0
		476001	0	0	0	0	1	0	0	0	0	0
		476002	0	4	10	0	0	1	0	0	0	0
		476009	0	0	0	0	1	0	0	0	0	0
		476031	0	0	0	0	0	1	0	0	2	0
		476035	0	0	0	0	0	0	1	1	0	0
		486005	0	0	0	0	0	0	0	0	1	0
		Total	3	6	18	0	24	6	8	13	14	18
	Proportion (p)	465932	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.071	0.056
		466001	0.333	0.000	0.000	0.000	0.125	0.000	0.000	0.000	0.000	0.000
		466002	0.000	0.000	0.389	0.000	0.000	0.333	0.125	0.000	0.214	0.111
		466003	0.000	0.000	0.000	0.000	0.083	0.000	0.750	0.000	0.000	0.167
		466004	0.000	0.333	0.056	0.000	0.500	0.333	0.000	0.000	0.000	0.222
		466005	0.000	0.000	0.000	0.000	0.083	0.000	0.000	0.000	0.143	0.000
		466031	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.154	0.071	0.000
		466032	0.667	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.071	0.056
		466033	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.769	0.143	0.389
		466100	0.000	0.000	0.000	0.000	0.125	0.000	0.000	0.000	0.071	0.000
		476001	0.000	0.000	0.000	0.000	0.042	0.000	0.000	0.000	0.000	0.000
		476002	0.000	0.667	0.556	0.000	0.000	0.167	0.000	0.000	0.000	0.000
		476009	0.000	0.000	0.000	0.000	0.042	0.000	0.000	0.000	0.000	0.000

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Port	User Group Parameter	Stat Area	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	
		476031	0.000	0.000	0.000	0.000	0.000	0.167	0.000	0.000	0.143	0.000	
		476035	0.000	0.000	0.000	0.000	0.000	0.000	0.125	0.077	0.000	0.000	
		486005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.071	0.000	
	SE(p)	465932	-	-	-	-	-	-	-	-	0.071	0.056	
		466001	0.333	-	-	-	0.069	-	-	-	-	-	
		466002	-	-	0.118	-	-	0.211	0.125	-	0.114	0.076	
		466003	-	-	-	-	0.058	-	0.164	-	-	0.090	
		466004	-	0.211	0.056	-	0.104	0.211	-	-	-	0.101	
		466005	-	-	-	-	0.058	-	-	-	0.097	-	
		466031	-	-	-	-	-	-	-	0.104	0.071	-	
		466032	0.333	-	-	-	-	-	-	-	0.071	0.056	
		466033	-	-	-	-	-	-	-	0.122	0.097	0.118	
		466100	-	-	-	-	0.069	-	-	-	0.071	-	
		476001	-	-	-	-	0.042	-	-	-	-	-	
		476002	-	0.211	0.121	-	-	0.167	-	-	-	-	
		476009	-	-	-	-	0.042	-	-	-	-	-	
		476031	-	-	-	-	-	0.167	-	-	0.097	-	
		476035	-	-	-	-	-	-	0.125	0.077	-	-	
		486005	-	-	-	-	-	-	-	-	0.071	-	
Whittier	Charter	Reported Effort (angler-days)	466002	nd	nd	nd	nd	nd	0	11	57	69	69
			466003	nd	nd	nd	nd	nd	0	0	22	17	3
			466004	nd	nd	nd	nd	nd	0	3	0	5	0
			466005	nd	nd	nd	nd	nd	0	6	0	0	36
			466033	nd	nd	nd	nd	nd	0	0	0	0	7
			475932	nd	nd	nd	nd	nd	0	0	6	1	0
			475933	nd	nd	nd	nd	nd	0	0	24	10	0
			476002	nd	nd	nd	nd	nd	0	0	0	0	36
			476003	nd	nd	nd	nd	nd	0	6	18	20	0
			476004	nd	nd	nd	nd	nd	0	0	0	3	0
			476007	nd	nd	nd	nd	nd	0	0	0	0	2
			476008	nd	nd	nd	nd	nd	0	4	0	2	3
			476009	nd	nd	nd	nd	nd	0	0	0	0	2
			476031	nd	nd	nd	nd	nd	0	0	0	1	0
			476033	nd	nd	nd	nd	nd	0	0	0	2	3
			476035	nd	nd	nd	nd	nd	0	0	0	1	0
			485931	nd	nd	nd	nd	nd	0	0	2	0	0
			485932	nd	nd	nd	nd	nd	0	7	2	24	2
			485935	nd	nd	nd	nd	nd	0	0	0	11	0
			486001	nd	nd	nd	nd	nd	0	10	19	0	0
			486033	nd	nd	nd	nd	nd	0	0	1	0	0
			486100	nd	nd	nd	nd	nd	0	3	0	0	0
		Total		0	0	0	0	0	0	50	151	166	163
	Proportion (p)	466002	nd	nd	nd	nd	nd	0.000	0.220	0.377	0.416	0.423	
		466003	nd	nd	nd	nd	nd	0.000	0.000	0.146	0.102	0.018	
		466004	nd	nd	nd	nd	nd	0.000	0.060	0.000	0.030	0.000	
		466005	nd	nd	nd	nd	nd	0.000	0.120	0.000	0.000	0.221	
		466033	nd	nd	nd	nd	nd	0.000	0.000	0.000	0.000	0.043	
		475932	nd	nd	nd	nd	nd	0.000	0.000	0.040	0.006	0.000	
		475933	nd	nd	nd	nd	nd	0.000	0.000	0.159	0.060	0.000	
		476002	nd	nd	nd	nd	nd	0.000	0.000	0.000	0.000	0.221	
		476003	nd	nd	nd	nd	nd	0.000	0.120	0.119	0.120	0.000	
		476004	nd	nd	nd	nd	nd	0.000	0.000	0.000	0.018	0.000	
		476007	nd	nd	nd	nd	nd	0.000	0.000	0.000	0.000	0.012	
		476008	nd	nd	nd	nd	nd	0.000	0.080	0.000	0.012	0.018	
		476009	nd	nd	nd	nd	nd	0.000	0.000	0.000	0.000	0.012	
		476031	nd	nd	nd	nd	nd	0.000	0.000	0.000	0.006	0.000	
		476033	nd	nd	nd	nd	nd	0.000	0.000	0.000	0.012	0.018	
		476035	nd	nd	nd	nd	nd	0.000	0.000	0.000	0.006	0.000	
		485931	nd	nd	nd	nd	nd	0.000	0.000	0.013	0.000	0.000	
		485932	nd	nd	nd	nd	nd	0.000	0.140	0.013	0.145	0.012	
		485935	nd	nd	nd	nd	nd	0.000	0.000	0.000	0.066	0.000	
		486001	nd	nd	nd	nd	nd	0.000	0.200	0.126	0.000	0.000	
		486033	nd	nd	nd	nd	nd	0.000	0.000	0.007	0.000	0.000	
		486100	nd	nd	nd	nd	nd	0.000	0.060	0.000	0.000	0.000	

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Port	User Group Parameter	Stat Area	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	SE(p)	466002	nd	nd	nd	nd	-	0.059	0.040	0.038	0.039	
		466003	nd	nd	nd	nd	-	-	0.029	0.024	0.011	
		466004	nd	nd	nd	nd	-	0.034	-	0.013	-	
		466005	nd	nd	nd	nd	-	0.046	-	-	0.033	
		466033	nd	nd	nd	nd	-	-	-	-	0.016	
		475932	nd	nd	nd	nd	-	-	0.016	0.006	-	
		475933	nd	nd	nd	nd	-	-	0.030	0.019	-	
		476002	nd	nd	nd	nd	-	-	-	-	0.033	
		476003	nd	nd	nd	nd	-	0.046	0.026	0.025	-	
		476004	nd	nd	nd	nd	-	-	-	0.010	-	
		476007	nd	nd	nd	nd	-	-	-	-	0.009	
		476008	nd	nd	nd	nd	-	0.039	-	0.008	0.011	
		476009	nd	nd	nd	nd	-	-	-	-	0.009	
		476031	nd	nd	nd	nd	-	-	-	0.006	-	
		476033	nd	nd	nd	nd	-	-	-	0.008	0.011	
		476035	nd	nd	nd	nd	-	-	-	0.006	-	
		485931	nd	nd	nd	nd	-	-	0.009	-	-	
		485932	nd	nd	nd	nd	-	0.050	0.009	0.027	0.009	
		485935	nd	nd	nd	nd	-	-	-	0.019	-	
		486001	nd	nd	nd	nd	-	0.057	0.027	-	-	
		486033	nd	nd	nd	nd	-	-	0.007	-	-	
		486100	nd	nd	nd	nd	-	0.034	-	-	-	
Whittier	Private	Reported Effort (angler-days)	466003	nd	nd	nd	nd	0	0	0	7	0
			476006	nd	nd	nd	nd	0	0	0	0	1
			476008	nd	nd	nd	nd	0	0	0	12	0
			476032	nd	nd	nd	nd	0	0	0	0	1
			476033	nd	nd	nd	nd	1	0	0	1	1
			485932	nd	nd	nd	nd	0	0	0	0	4
			486001	nd	nd	nd	nd	0	0	1	0	1
			486005	nd	nd	nd	nd	0	0	0	0	2
			486033	nd	nd	nd	nd	0	0	0	0	1
			486034	nd	nd	nd	nd	0	0	2	1	0
		Total		0	0	0	0	1	0	3	21	11
	Proportion (p)		466003	nd	nd	nd	nd	0.000	0.000	0.000	0.333	0.000
			476006	nd	nd	nd	nd	0.000	0.000	0.000	0.000	0.091
			476008	nd	nd	nd	nd	0.000	0.000	0.000	0.571	0.000
			476032	nd	nd	nd	nd	0.000	0.000	0.000	0.000	0.091
			476033	nd	nd	nd	nd	1.000	0.000	0.000	0.048	0.091
			485932	nd	nd	nd	nd	0.000	0.000	0.000	0.000	0.364
			486001	nd	nd	nd	nd	0.000	0.000	0.333	0.000	0.091
			486005	nd	nd	nd	nd	0.000	0.000	0.000	0.000	0.182
			486033	nd	nd	nd	nd	0.000	0.000	0.000	0.000	0.091
			486034	nd	nd	nd	nd	0.000	0.000	0.667	0.048	0.000
	SE(p)		466003	nd	nd	nd	nd	-	-	-	0.105	-
			476006	nd	nd	nd	nd	-	-	-	-	0.091
			476008	nd	nd	nd	nd	-	-	-	0.111	-
			476032	nd	nd	nd	nd	-	-	-	-	0.091
			476033	nd	nd	nd	nd	0.000	-	-	0.048	0.091
			485932	nd	nd	nd	nd	-	-	-	-	0.152
			486001	nd	nd	nd	nd	-	-	0.333	-	0.091
			486005	nd	nd	nd	nd	-	-	-	-	0.122
			486033	nd	nd	nd	nd	-	-	-	-	0.091
			486034	nd	nd	nd	nd	-	-	0.333	0.048	-

Note: nd - indicates no data collected